

**SAN BERNARDINO COUNTY  
INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM**

This form and the descriptive information in the application package constitute the contents of Initial Study pursuant to County Guidelines under Ordinance 3040 and Section 15063 of the State CEQA Guidelines.

USGS Quad: Goat Mountain  
T,R, Section: T2N, R6E, Sections 20, 21, 28, 29 (SBBM)  
Thomas Bros: San Bernardino and Riverside Counties, 2003 edition, pages 4748 and 4818  
Planning Area: Yucca Valley  
Community: N/A  
OLUD: RL, RL-5, RC  
Improvement Level: 4/5

**PROJECT DESCRIPTION:**

**1. Project Title:** Landers Sanitary Landfill Solid Waste Facility Permit Revision

**2. Lead Agency Name and Address:**

County of San Bernardino  
Solid Waste Management Division  
222 West Hospitality Lane, Second Floor  
San Bernardino, CA 92415-0017

**3. Contact person and phone number:**

Arthur L Rivera, P.E., Public Works Engineer IV  
(909) 386-8701

Erma J. Hurse, Planner III  
(909) 386-8701

**4. Project location:**

The Landers Sanitary Landfill is located in an unincorporated portion of the County of San Bernardino approximately two miles south of the community of Landers and four miles east of State Highway 247 on Winters Road (Figure 1).

**5. Project sponsor's name and address:**

County of San Bernardino  
Solid Waste Management Division  
222 West Hospitality Lane, Second Floor  
San Bernardino, CA 92415-0017

**6. Prepared by:**

Lilburn Corporation  
1950 Business Center Drive  
San Bernardino, CA 92408

**Description of project:**

**Regulatory Requirements**

The Landers Sanitary Landfill (LSL) operates under Solid Waste Facilities Permit (SWFP) number 36-AA-0057 issued on August 3, 1999, by the County of San Bernardino Department of Public Health Division of

Environmental Health Services, acting as the Local Enforcement Agency (LEA) for the California Integrated Waste Management Board (CIWMB). Under Title 27 California Code of Regulations (CCR) the operator must submit an application for permit revision before implementing a significant change in design or operation. The application needs to include a discussion of proposed changes in design and operation, updated amendments to the Report to Disposal Site Information (RDSI), and an updated estimate of the remaining site life and capacity.

The preparation of a Joint Technical Document (JTD) combines elements of two regulations to eliminate redundancy in reports on landfill operation. Under Title 23, operators of a waste management facility were required to submit a Report of Waste Discharge (ROWD) in order to acquire an operating permit known as a Waste Discharge Requirement (WDR). The Regional Water Quality Control Board (RWQCB) was responsible for reviewing the ROWD and issuing the WDRs. Additionally, under Title 14, operators were required to submit a Report of Disposal Site Information (RDSI) in order to obtain a SWFP. An ROWD required much of the same information contained in the RDSI. For this reason, Title 27 was developed to integrate particular sections of Titles 14 and 23 and eliminate repeated information in the permitting documents.

The RDSI for LSL was prepared in November 1994 and was last revised December 2003<sup>1</sup>. Under new regulations presented in Title 27, Section 21585, the operator may submit regulatory documents under one cover. The operator of a disposal site that is required to submit an RDSI, Preliminary Closure Postclosure Maintenance Plan (PCPMP), and ROWD may do so under a JTD.

The County of San Bernardino Solid Waste Management Division (SWMD) is submitting a JTD<sup>2</sup> to update the existing SWFP and comply with new regulations and requirements established in Title 27.

### **Project Summary:**

This Initial Study has been prepared in compliance with the California Environmental Quality Act (CEQA) to assess the potential environmental effects associated with the proposed revisions to the 1999 Solid Waste Facilities Permit (SWFP) No. 36-AA-0057 for the Landers Sanitary Landfill. The existing SWFP is up for review in August 2004. In accordance with Title 27, Section 21675 (a), SWMD must submit an application for permit review to the Local Enforcement Agency (LEA). Since the last revision/addendums to the SWFP in 1999, the following changes have occurred at the site:

- Use of alternative daily cover (ADC) – including the proposed use of green material and tarps; as approved by the LEA and RWQCB.
- Shift in types of material received – includes a proposed increase in liquid waste from 96 tons per day to 200 tons per day. Liquid waste received would continue to contribute toward the maximum daily tonnage of 1,200 tons per day; therefore no increase in the maximum daily permitted tonnage, expansion of the landfill footprint, or vertical expansion above the permitted height is proposed.
- Change in estimated closure day – based on the site's design capacity of 3,083,500 cubic yards and an estimated in place volume of 1,737,974 cubic yards in June 2004, revisions to the site's diminishing landfill capacity indicated that the site could, based on the amount of source recovery, recycling, and wasteshed growth, remain open until early 2013 verses 2008. Table 3 shows the expected annual volume of refuse, the remaining capacity at the end of each year, and the expected date that the Landers Sanitary Landfill will reach capacity.
- Environmental control upgrades – upgrades to the landfill gas monitoring system and groundwater monitoring system will be described in the Joint Technical Document.

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<sup>1</sup> On file at the San Bernardino County SWMD offices, 222 West Hospitality Lane, 2<sup>nd</sup> Floor, San Bernardino, CA 92415.

<sup>2</sup> Ibid.

- Administrative changes – including incorporation of the County's name change within the Joint Technical Document, SWFP and Mitigation Monitoring Compliance Program.
- Revised Mitigation Monitoring Compliance Program (MMCP) –Review of the existing MMCP showed that some measures no longer applied to the landfill because they have been either 1) implemented or incorporated into the daily operation of the landfill and are verified through the daily operating log; 2) renumbered due to the County's revised Initial Study format; 3) required by state law; and/or 4) revised to reflect department name changes. A complete summary of changes to the MMCP is shown in Table 4 at the end of this Initial Study.

## **ENVIRONMENTAL/EXISTING SITE CONDITIONS:**

### **Location**

The Landers Sanitary Landfill is a Class III landfill owned by the County of San Bernardino Solid Waste Management Division. The landfill site has been in operation since 1963 and is operating under Solid Waste Facilities Permit No. 36-AA-0057 issued August 3, 1999 for a Class III landfill accepting only nonhazardous solid wastes, and Class II Liquid Septic Waste Surface Impoundments.

The landfill is located in an unincorporated portion of the County approximately two miles south of the community of Landers and four miles east of State Highway 247 on Winters Road (Figure 1). Access to the facility is provided from Winters Road, which is a paved road that extends four miles from Highway 247. Figure 2 shows the project site and immediate vicinity. The permitted site is 637.92 acres located in Township 2 North, Range 6 East, portions of Sections 20, 21, 28, and 29, San Bernardino Baseline and Meridian. Only a small portion of the site is utilized for current landfilling activities. Disturbed portions of the site are described as follows:

Inactive Landfill – A two-acre unlined area previously used as a burn site from 1965 to 1972. From 1972 to 1974, the two-acre area was used for refuse disposal. In 1974, disposal activities ceased in this area.

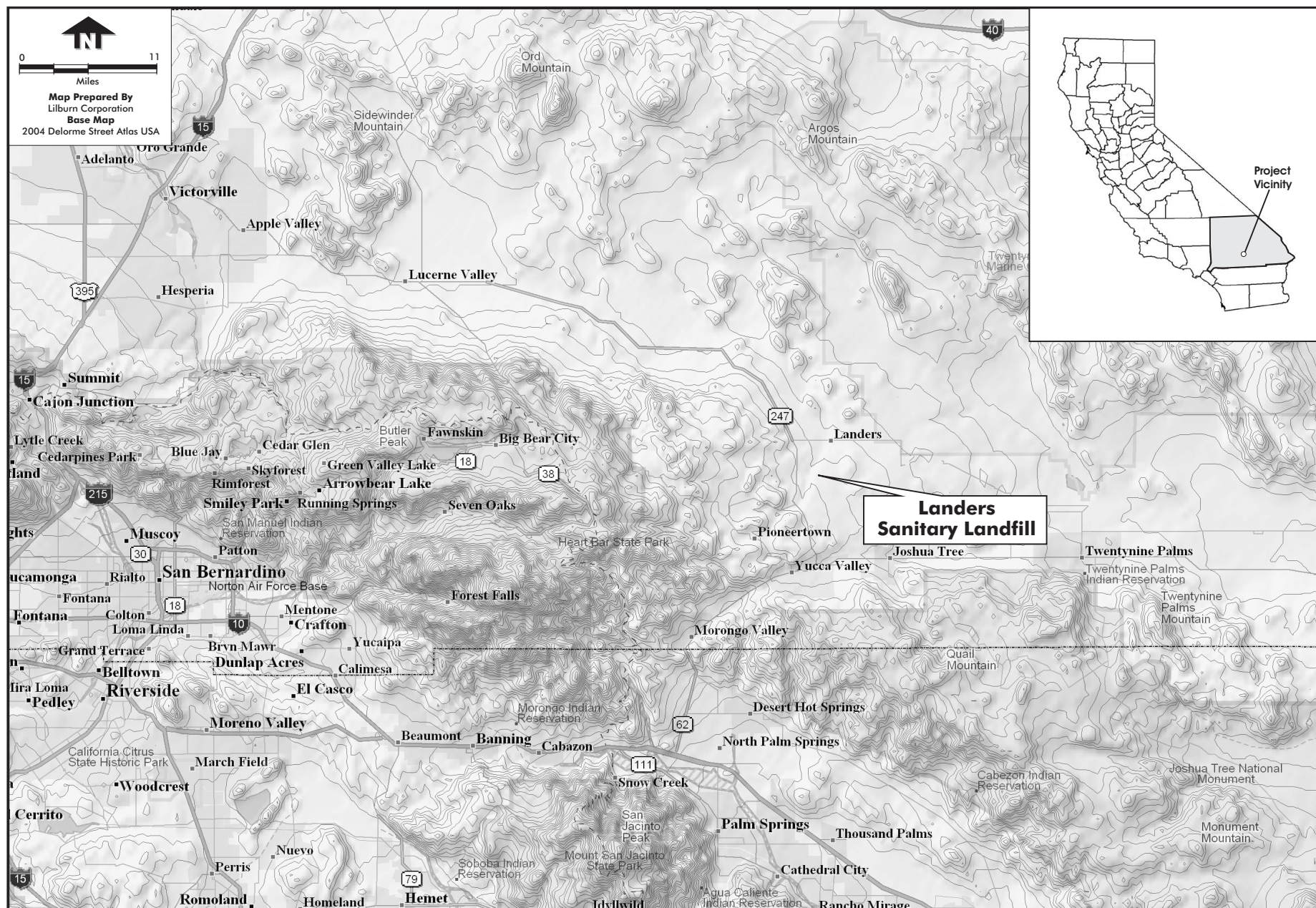
Active Landfill – The current 42-acre active waste disposal area began accepting waste in 1965. The area is unlined, does not contain a leachate control and removal system, is permitted to receive a maximum of 1,200 tons per day (tpd), and has a design capacity of 3,083,500 cubic yards.

Unlined Septage Area – This 3.7-acre area contains the eight (8) former Class II surface impoundments which were constructed in 1965 and permitted to received septic tank pumpings, chemical toilet wastes, pumpings from grease traps, pumpings from garage and service station oil traps, and crankcase oil. The unlined surface impoundments ceased operations in November 1995 and were clean closed in 1998 in accordance with combined State Water Resources Control Board (SWRCB) and California Integrated Waste Management Board (CIWMB) Regulations, Division 2, Title 27, Section 21400(a) and (b)(1).

Lined Septage Disposal Area – In October 1995, two lined Class II surface impoundments were constructed on an approximate three-acre portion of the site. The ponds are currently used for the drying of septage waste, which is ultimately disposed of in the landfill. Each pond is lined and contains a leak detection system. The ponds are currently permitted to receive a maximum of 96 tons per day. This quantity is proposed to be increased to a maximum 200 liquid tons per day.

Borrow Area – The current borrow area occupies approximately 10 acres and is located southeast and adjacent to the active landfill area.

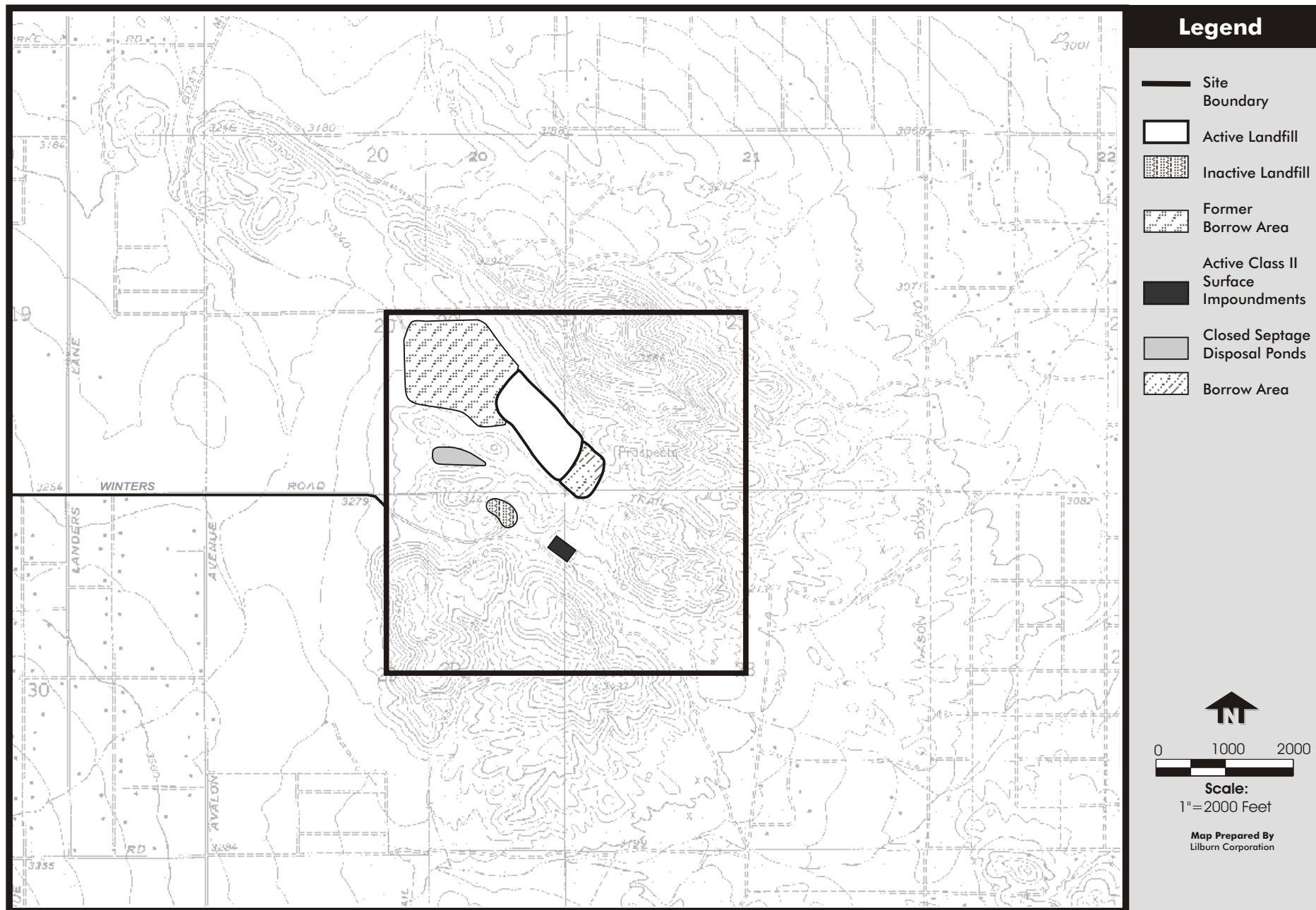
Storage Area – The storage area, located near the landfill working face, is used for the temporary bin storage of hazardous waste and recyclable materials.



## Regional Location Map

## Landers Sanitary Landfill Initial Study

San Bernardino County, California



## Site Location Map

Landers Sanitary Landfill  
 Initial Study  
 San Bernardino County, California

## **SURROUNDING LAND USES**

There are no structures within 1,000 feet of the property boundaries. Land use designations surrounding the landfill site are RL (Rural Living), RL-5 (Rural Living with a minimum parcel size of five acres), and RC (Resource Conservation). Existing development is sparse and only limited low-density development is anticipated in the County General Plan. Existing land uses and land use districts for the surrounding area are shown in Table 1.

**Table 1**  
**Existing Land Uses, Designated Districts and Improvement Levels**  
**For Area Surrounding The Landers Sanitary Landfill**

<b>LOCATION</b>	<b>EXISTING LAND USE</b>	<b>COUNTY LAND USE DISTRICT</b>	<b>IMPROVEMENT LEVEL</b>
North	Vacant	RL	5
South	Vacant	RL-5, RC	4/5
East	Vacant	RL, RL-5	4/5
West	Vacant	RL, RL-5	4/5

## **PROPOSED OPERATIONAL CHANGES DESCRIPTION**

This Initial Study has been prepared to reflect minor changes in operation that have occurred at the landfill and that will require a revision to the SWFP. Proposed operational changes that will be implemented as part of normal disposal operations and reflected in the updated SWFP include: 1) description of revised/updated operational changes including the use of alternative daily cover; 2) description of new environmental controls including upgrades to the landfill gas monitoring system and groundwater monitoring systems; 3) administrative changes (County Department name changes, and removal of prior site operator), and 4) an increase in the maximum quantity of liquid waste received from 96 tons per day to 200 tons per day. The proposed increase in liquid waste would allow for future growth and would not require a change in the existing maximum permitted tonnage, and would continue to remain a portion of the total maximum permitted tonnage of 1,200 tons per day.

Table 2 shows the existing regulatory permit conditions and requirements, and the proposed changes in operations that require revisions to the SWFP.

### **Change in Estimated Closure Date**

The estimated closure date in the current SWFP is 2008. The Landers Sanitary Landfill has a design capacity of 3,083,500 cubic yards; the in-place volume estimated in June 2004 was 1,737,974 cubic yards (SWMD 2004). Table 3 shows the expected annual volume of refuse, the remaining capacity at the end of each year, and the expected date that the Landers Sanitary Landfill will reach capacity. As shown in Table 3, the Landers Sanitary Landfill will remain open until early 2013. The actual landfill life will ultimately depend on the County's Integrated Solid Waste Management Plan, the amount of source recovery and recycling accomplished, and the amount of wasteshed growth throughout the life of the landfill.

**Table 2**  
**Existing Regulatory Permit Conditions**  
**And Proposed Changes In Operation**  
**Landers Sanitary Landfill**

	<b>Existing</b>	<b>Proposed</b>
Operations	landfill disposal site; liquid septage waste disposal	No changes
Hours Open to the Public <sup>(3)</sup>	8 a.m. to 4:30 p.m. 7 days/week	No changes in hours open to the public
Hours of Site Activities	7 a.m. to 8 p.m. 7 days/week	No changes in hours of site activity
Tons per day	Maximum 1,200 tpd; no change in waste type	No changes in maximum permitted tons per day
Tons per day - Liquid	Maximum 96 tpd	Increase to a maximum of 200 tpd
Traffic Volume	Maximum 592 vehicles/day	No change in maximum vehicles allowed per day
Permitted Area	637.92 acres	No change in permitted area
Disposal Footprint	44 acre landfill footprint; 4-acre surface impoundment area	No increase in footprint or surface impoundment area
Maximum Elevation	3,460 feet above sea level	No change in max elevation
Closure Date	2008	2013 <sup>(1)</sup>

1 See Table 3 - Diminishing Capacity.

**Table 3**  
**Diminishing Land Capacity**  
**Landers Sanitary Landfill**

Year	<b><i>Tons Received</i></b>					<b><i>Volume Consumed</i></b>			
	Solid Waste	Septic	Septic	Waste To	Average	Solid Waste	Cover	Landfill	Remaining
	(tons) Received (Wet Tons)	Waste Received (Dry Tons)	Waste Received (Dry Tons)	Landfill (tons)	Tpd	Volume (cy)	Volume (cy)	Volume (cy)	Capacity at End of Year (cy)
Jul-04									1,345,026
2004/05	59,036	24,077	2,841	61,877	202	103,100	34,400	137,500	1,207,526
2005/06	60,807	24,799	2,926	63,733	208	106,200	35,400	141,600	1,065,926
2006/07	62,631	25,543	3,014	65,645	214	109,400	36,500	145,900	920,026
2007/08	64,510	26,310	3,105	67,615	220	112,700	37,600	150,300	769,726
2008/09	66,445	27,099	3,198	69,643	227	116,100	38,700	154,800	614,926
2009/10	68,439	27,912	3,294	71,732	234	119,600	39,900	159,500	455,426
2010/11	70,492	28,749	3,392	73,884	241	123,100	41,000	164,100	291,326
2011/12	72,607	29,612	3,494	76,101	248	126,800	42,300	169,100	122,226
2012/13	74,785	30,500	3,599	78,384	255	130,600	43,500	174,100	(51,874)
Capacity Ends Feb 2013									

**NOTES:**

1. 2004 waste loadings extrapolated from 2002/2003 County of San Bernardino SWMD tipping records.
2. Assuming an annual increase in waste tonnage of 3% per year, and 307 operating days per year
3. Using an inplace waste density of 1,200 lbs/cy.
4. Assuming a refuse to daily cover ratio of 3 to 1 including intermediate cover.
5. Remaining capacity based upon 2004 topographic maps and final grading plans.

## **DESCRIPTION OF EXISTING ENVIRONMENTAL CONDITIONS**

### **Landfill Activities**

Solid waste delivered to the Landers Sanitary Landfill (LSL) can generally be classified as residential, commercial, or industrial. Residential waste includes domestic garbage and rubbish that originates in residential dwellings. Commercial waste includes types of solid waste generated by retail stores, offices, and other commercial sources, excluding residences, and excluding industrial waste. Industrial waste includes types of solid waste that result from industrial processes and manufacturing operations excluding hazardous materials. In addition, demolition, construction debris, and inert solid wastes are received at the site. The landfill also recycles tires, white goods (appliances), aluminum and glass. The site accepts non-hazardous industrial wastes, with no liquid content (>50 % liquid by weight) or other physical properties (i.e. powdery or dusty materials) that could cause health, safety, or operational problems without special handling. The landfill does not accept designated wastes, such as asbestos containing waste, hazardous wastes, or large dead animals.

The scale facilities are at the entrance of the landfill. Winters Road, the landfill access road, is paved with asphalt to the entrance of the landfill, where it extends as a paved road to the active disposal areas. A permanent fence and a gate are at the entrance of the landfill, along with a sign with the facility name and owner. Illegally disposed, household hazardous materials are stored in a designated moveable, hazardous waste bin, located near the working face.

The LSL is currently permitted to operate Class II surface impoundments. The surface impoundments (septage ponds) are used for the disposal of septic tank pumping and chemical toilet wastes. Liquid septage is placed in the ponds to dry; the dried sediments are excavated and disposed at the Barstow Sanitary Landfill. The site has two lined ponds that were constructed in 1995. The proposed increase in liquid waste would allow for future growth and would not require a change in the existing maximum permitted tonnage, and would continue to remain a portion of the total maximum permitted tonnage of 1,200 tons per day.

Vehicles carrying waste (both solid and septage) stop at the scalehouse to be weighed prior to entering the landfill. Solid waste loads are visually inspected as a part of the County's loadchecking program in order to identify hazardous materials. Loadcheckers are trained to identify hazardous materials and either remove them from the load or prevent the vehicle from entering the landfill. Loadchecking consists of inspecting random incoming loads; regular visual inspection of the wastes deposited at the landfill; training of facility personnel in hazardous waste recognition and proper hazardous waste handling procedures; and installation of signs at the facility entrance indicating that no hazardous waste is permitted at the site.

The landfill is operated using the area-fill method. The area currently being filled is referred to as the active working face. Typically, waste cells at the working face are developed as part of advancing lifts overlying existing refuse. Refuse is placed in cells that average 15 feet high and 100 by 150 feet in area. Waste is unloaded at the toe of the working face of the cell, near the active side. A bulldozer is used to push, spread, and compact waste on the working face in shallow layers up to two feet deep. The equipment traverses the active working face three to five times to evenly spread and compact the waste. At the end of each working day, the waste is covered with a minimum of six inches of soil. Cells that are inactive for 180 days are covered with an interim cover of 12 inches of compacted soil or other material such as an alternative daily cover that is permitted for use. Refuse and cover materials are graded to drain run-off of stormwater from the landfill. Effective drainage minimizes ponding, infiltration, and erosion.

### **Personnel and Equipment**

Seven full-time on-site operations personnel are employed at the landfill and include: the site supervisor, the scalehouse operator, two equipment operators, two laborers and a loadchecker. In addition, six variable or

occasional workers are on-site for litter control. The on-site equipment available to perform normal daily operations includes a bulldozer, scraper, high-capacity vacuum litter collector and water truck. The scraper is also used for maintaining haul roads, developing the tipping area, and stockpiling cover soil. Tub grinders are periodically used on site to assist in volume reduction and recycling (mulch production) when large quantities of trees or other landscaping materials are received.

Back-up equipment on-site consists of a compactor, backhoe and/or loader that may be used on an as-needed basis. Two scrapers may also be used as necessary for a higher productivity of daily landfilling activities. If equipment breaks down, additional backup equipment is available on-site or can be transferred to LSL from another County landfill or rented on a temporary basis.

## **Material Cover**

The top and inactive sides of cells are covered with six inches of compacted clean fill dirt generated from on-site borrow sources in a continuous daily operation. The active working face of the cell is covered with a minimum of six inches of compacted cover soil. These soils are adequate to minimize excess infiltration of surface water runoff, escape of odor, the emergence of flies, the progress of fires, and attraction of nuisance vectors such as insects, rodents, and birds.

Alternative Daily Cover (ADC) may be used in lieu of soil cover. The CIWMB has approved ten materials as suitable for ADC applications based on multiple successful demonstration projects that have been performed throughout the state. The LEA and RWQCB, Colorado Region approved the use of green material and tarps as ADC at the LSL.

Filling proceeds in a series of cells approximately 15 feet thick. Cells that are inactive for 180 days are covered with intermediate cover of 12 inches of compacted soil or other material such as an alternative daily cover that is used at other County landfills. The intermediate cover is inspected by the Landfill Supervisor for soil depth and/or material suitability so solid waste is not exposed.

## **Drainage and Erosion Control**

Drainage at the Landers Sanitary Landfill is regulated by the Waste Discharge Requirements (WDRs) for all municipal solid waste landfills within the RWQCB, Colorado River Basin Region under RWQCB Order No. 93-071, and Order No. R7-2002-0127 and CAO No. 00-107, which were issued specifically for the site. WDRs contain the discharge specifications, provisions, and monitoring and reporting requirements. The landfill has been designed, and is currently operated, with drainage control systems that divert run-on and run-off away from the disposal areas to prevent ponding, infiltration, inundation, erosion, slope failure, and washout.

The landfill operator also maintains drainage systems to adequately handle the calculated volume of precipitation and peak flows from 100-year, 24-hour storms.

At the Landers Sanitary Landfill, the existing runoff drainage system consists of natural drainage channels in the northwest corner, with runoff contained in the site's perimeter dike system. Concrete drainage channels have also been installed around the septage pond system. Landfill side slopes are generally 3h:1v (horizontal:vertical) or flatter. The top deck area has side slopes of 2.5 to 3 percent to prevent water from ponding. Natural desert sands and gravels obtained from the borrow area are used for erosion control.

For completed areas, the landfill is designed to maximize storm water drainage and minimize erosion of the final soil cover to prevent landfill wastes from becoming exposed. If settlement occurs, causing water to pond, the water is removed from the ponded area and the area is regraded as soon as weather permits.

## **Groundwater Monitoring**

The landfill is underlain by bedrock that consists of fractured metamorphic rocks. Groundwater flow is generally restricted to fractures within the bedrock.

Investigations have been conducted at the Landers Sanitary Landfill to evaluate potential groundwater impacts related to the various landfilling and septage disposal activities. These investigations have included a Solid Waste Assessment Test (IT, 1989); subsequent groundwater monitoring program; an Evaluation Monitoring Program (EMP) investigation (Earth Tech, 1996); and a Phase 1 study for the old septage disposal area conducted by EMCON (1996).

Since 1988, 14 groundwater monitoring wells have been installed at the landfill including one consistently dry well; one upgradient well; four downgradient wells; and eight EMP wells. Because groundwater monitoring is currently ongoing, additional groundwater monitoring wells will be installed as needed to further characterize the extent of the groundwater impact. Wells were monitored twice a year in 1988 and 1989, and quarterly monitoring was initiated in 1990. Monitoring is performed consistent with the RWQCB-issued Cleanup and Abatement Order No. 91-062, and RWQCB Waste Discharge Requirement Order Nos. 91-028 and 93-071.

Within the unlined surface impoundments, historical and recent groundwater monitoring results indicate that groundwater contains nitrates and nitrites at concentrations exceeding the established drinking water standards. As of November 1995, the unlined surface impoundments have ceased accepting septage waste and were clean closed in 1998. Closure of the unlined septage ponds included removal of all remaining dried septage solids. With continued groundwater monitoring and clean closure of the unlined surface impoundments, remediation of groundwater impact is anticipated.

In addition to the groundwater monitoring system, a vadose monitoring system was installed in 1996 in compliance with 23 CCR Section 2550-7 around the septage ponds. The system includes eight wells that are monitored quarterly to determine if any leakage from the active septage ponds is occurring.

### **Landfill Gas Collection and Monitoring System**

Pursuant to Section 20919.5, Title 27 CCR, a quarterly methane-monitoring program was implemented at the site and includes 11 landfill gas (LFG) methane monitoring probes. All LFG monitoring probes and on-site structures (Scale house, Foreman's shed) are monitored in accordance with regulatory requirements. Currently, landfill gas is monitored quarterly, and results of probe and on-site structure monitoring are reported to the LEA and MDAQMD. Each report includes methane concentrations, documentation of sampling conditions, instrumentation utilized, and a brief description of methods. In addition, the monitoring reports include pressures measured in the LFG probes and barometric pressure.

Perimeter probe monitoring results for the fourth quarter of 2003 revealed methane gas concentrations to be well below Rule 1150.1 and State standards at the landfill.

## **Litter Control**

The landfill operator is required as a condition of the existing SWFP, to maintain portable litter-control fencing around the active disposal cell and tipping area and have sufficient litter-picking personnel available to preclude litter from blowing and accumulating off-site. Personnel routinely collect incidental litter around the perimeter of the landfill and off-site in the vicinity of the landfill.

## **Recycling Program**

Recycling activities are conducted at the Landers Sanitary Landfill as part of daily operations. The activities associated with recycling (i.e., waste separation, handling, and storage) are summarized below.

Drop-off/storage bins: One (1) 40 cubic yard (CY) bin is provided for the storage of recyclable mixed plastic, and one (1) 80 CY bin is provided for recyclable metals. Stockpiled material will be stored and removed in accordance with CCR Title 14, Chapter 3, Article 7.5.

Tire handling: The SWMD has developed a Waste Tire Handling and Disposal Program. Tires are separated from the disposal wastes at the tipping area. The separated tires are stockpiled for shipping off site to be processed by other appropriate disposal or recycling means.

## **Environmental Evaluation**

The Environmental Evaluation (Initial Study) identifies the maximum potential environmental effects of the proposed project. The purpose is to identify any potentially significant impacts and discuss mitigation measures for identified impacts. Responses are substantiated by summarizing the assessment of significant impacts and referencing documents used as research (Landers Landfill Initial Study, Solid Waste Facility Permit Revision, 1999). A Negative Declaration was adopted by the County in 1999 for the 1999 Landers Sanitary Landfill Solid Waste Facilities Permit Revision (SWFPR). This Initial Study is tiered from the 1999 Initial Study SWFPR, which is incorporated by reference. If no changes in existing conditions occurred regarding the particular environmental issue, direct reference to the 1999 Initial Study is made. A copy of the Initial Study can be reviewed at the County of San Bernardino Planning Department, 385 North Arrowhead Avenue, 3<sup>rd</sup> Floor, San Bernardino, California. The Mitigation Monitoring and Compliance Program (MMCP) adopted for the 1999 SWFPR will continue to be implemented. Mitigation Measures contained in the MMCP are listed at the end of this Initial Study.

## **Mitigation Monitoring and Compliance Program**

The LSL is currently subject to environmental monitoring under the Mitigation Monitoring and Compliance Program (MMCP) adopted with the Negative Declaration for the 1999 SWFP. Mitigation measures identified in the 1999 MMCP that would still apply to the landfill under the proposed revisions to the SWFP have been included in this Initial Study where appropriate. Minor text revisions may appear in some of these measures to reflect changes to the environmental conditions that have occurred at the LSL. In addition, organization of the Initial Study has been rearranged by San Bernardino County to provide a more complete and comprehensive environmental analysis of on-site conditions. Subsequently, the topics for discussion of environmental conditions have been reorganized. Mitigation measures that will remain as part of the new permit revision application will be renumbered with the old number identified in parenthesis for easy reference between previous documents.

In conducting this Initial Study, a review of the adopted MMCP for the 1999 SWFP was undertaken to evaluate the implementation of the mitigation measures contained therein. The review showed that some measures no longer applied to the landfill because existing conditions have changed between 1999 and 2004. Some measures have been implemented or incorporated into the daily operation of the landfill and are therefore verified through the daily operating log. The remaining mitigation measures identified in the adopted MMCP that would still apply to the landfill have been included in the MMCP prepared in conjunction with this Initial Study. A revised MMCP was prepared for the project and includes the measures currently being implemented at the site and all other measures that may be required as a result of the environmental evaluation conducted in this Initial Study. These measures would then become conditions of the revised SWFP.

Mitigation measures identified in the 1999 MMCP that would still apply to the landfill under the proposed revisions to the SWFP have been included in this Initial Study where appropriate. Minor text revisions may appear in some of these measures to reflect changes to the environmental conditions that have occurred at the LSL. In addition, organization of the Initial Study has been rearranged by San Bernardino County to provide a more complete and comprehensive environmental analysis of on-site conditions. Subsequently, the topics for discussion of environmental conditions have been reorganized. Mitigation measures that will remain as part of the new permit revision application will be renumbered with the old number identified in parenthesis for easy reference between previous documents.

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

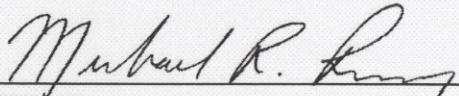
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                    | <input type="checkbox"/> Agriculture Resources              | <input type="checkbox"/> Air Quality            |
| <input type="checkbox"/> Biological Resources          | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Geology /Soils         |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality          | <input type="checkbox"/> Land Use/ Planning     |
| <input type="checkbox"/> Mineral Resources             | <input type="checkbox"/> Noise                              | <input type="checkbox"/> Population / Housing   |
| <input type="checkbox"/> Public Services               | <input type="checkbox"/> Recreation                         | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities / Service Systems   | <input type="checkbox"/> Mandatory Findings of Significance |   |

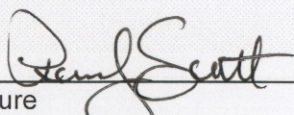
**DETERMINATION:** (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

- ☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

  
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Signature  
Michael R. Perry, Senior Project Manager  
Lilburn Corporation

December 17, 2004  
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Date

  
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Signature  
Randy Scott, Division Chief  
Advance Planning Division  
Land Use Services Department

12/21/04  
\_\_\_\_\_  
Date

## EVALUATION OF ENVIRONMENTAL IMPACTS

Pursuant to Section 15063 of CEQA Guidelines, an explanation is required for all "Potentially Significant Impact," "Potentially Significant Impact Unless Mitigation Incorporated," and "Less Than Significant Impact" answers, including a discussion of ways to mitigate the significant effects identified.

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
<b>I. AESTHETICS</b> — Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION (check \_\_\_ if project is located within the viewshed of any Scenic Route listed in the General Plan):

- a-b) The project site will not obstruct the view of any scenic vistas. Old Woman Springs Road, west of the site, is designated as a Scenic Route in the San Bernardino County General Plan, the site is over three miles from the closest point on Old Woman Springs Road. Scenic corridors are defined as the area extending 200 feet on either side of the scenic route. The Landfill is well beyond the corridor. The proposed project would continue the existing activity patterns on-site without a change to the present views of the site. Elevations of the adjacent hills range from approximately 3,200 to 3,600 feet above mean sea level (MSL). The final designed elevation for the existing landfill will be approximately 3,460 above MSL. The ultimate designed elevation for the landfill is approximately 75 feet above the existing elevations and side slopes would not exceed 3h:1v. The landfill mound would not become the prominent visual feature.

The site contains no visual features of unique quality except the adjacent hills. The adjacent hills are approximately 75 to 100 feet higher than the landfill. The County of San Bernardino General Plan does not designate the site as a scenic resource. Therefore, no impacts to scenic vistas, scenic resources or existing visual character at the site would result from the proposed project.

- c) The potential for litter to migrate from the site is common to all landfills. Permanent litter fences are installed around the landfill and portable litter fences are deployed around the active disposal area (see Section 3 for a discussion of wind erosion including fugitive dust and debris). The working area and the site are policed regularly to collect accumulated litter. Vehicles entering the site are required by the County to be covered. Two site personnel are assigned duties of litter control. The litter picking crews police the site each day to clear the litter blown on and off the site. A high-capacity vacuum litter collector is also used to help control litter on and off site. The use of litter fences at the immediate area of the working face and portable litter fencing, used where needed, assist in reducing potential impacts due to blowing litter. The proposed revisions to the SWFP would not create additional litter problems in the surrounding areas. Vehicles traveling to the site will continue to be covered to ensure litter will not migrate to the surrounding area of the landfill. Continued implementation of Mitigation Measures 25 and

26 from the 1999 MMCP will reduce the potentially significant impacts to a less than significant level and are renumbered here to reflect the reorganization of the Initial Study form.

**1.(25.) Maintain at least two permanent crewmembers each day to pick up litter both on and off-site that has escaped the control devices.**

**2.(26.) Implement the use of portable litter fencing during periods of high wind conditions to control the migration of litter from the site.**

As part of the County's long-term landfill operation, mitigation measures for landscaping/revegetation of the landfill's finished slopes were included in the adopted MMCP. Two such mitigation measures were identified in the 1997 Initial Study and incorporated into the MMCP for the 1999 SWFP. The measures are included in Section VI - Geologic Hazards, to control erosion or the loss of topsoil, but would also reduce visual contrast with the surrounding topography.

- d) The Landers Sanitary Landfill is currently open seven days per week from 8:00 a.m. to 4:30 p.m. The permitted hours include operating up to seven days per week from 7:00 a.m. to 8:00 p.m. There are no sensitive receptors located nearby.

Heavy equipment is equipped with lighting for night operational safety. Portable lighting would be used on occasions when site maintenance requires equipment to operate after dark. When site operations do occur after dark, the Mitigation Measure listed here (#27 from the 1999 MMCP) would be implemented:

**3.(27.)All exterior lighting, either permanent or temporary, shall consist of low-intensity sodium vapor lamps. All lights shall be shielded to ensure that the area of illumination is confined to the landfill or County property boundaries.**

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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**II. AGRICULTURE RESOURCES** — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION (check ☐ if project is located in the Important Farmlands Overlay):

- a-c) Most of the disturbed areas on-site no longer contain native soils. The continued disposal at the landfill therefore will not adversely impact prime or locally important agricultural soil. Native soils have been excavated, spread over the waste as cover, and compacted. Cover material will continue to be excavated at the site from an existing borrow area. The project area has no Prime Agricultural lands and no lands are shown in the Important Farmlands Overlay of the County's General Plan. No potential adverse impacts to soil, farmland, or agricultural crops have been identified with the continued solid waste disposal activities at the Landers Sanitary Landfill.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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**III. AIR QUALITY** — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- |   |                          |                                     |                                     |                                     |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Expose sensitive receptors to substantial pollutant concentrations?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

SUBSTANTIATION (discuss conformity with the South Coast Air Quality Management Plan, if applicable):

Environmental Setting

The Landers Sanitary Landfill is located in the East Desert region of San Bernardino County in the Southeast Desert Air Basin (SEDAB) within the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The arid climate in the region is characterized by hot, dry summers and relatively mild winters. The closest air quality monitoring station to the site is located in Twentynine Palms, approximately 45 miles southeast of the site. Air quality data from local monitoring stations in the region show that ozone and PM<sub>10</sub> (particulate matter less than 10 microns in diameter) measured at the Twentynine Palms station exceeded federal, and the more stringent state standards, an average of ten times per year for ozone and less than once per year for PM<sub>10</sub> (based on the state standard and information from years 1993 through 1995).

The LSL has been in operation since 1963. Emissions of criteria pollutants associated with the current operations at the landfill include landfill gas (LFG) emissions, exhaust emissions from on-site equipment (one D8N dozer, a 623 scraper, and a 2,000 gallon water truck), and fugitive dust emissions from grading and covering active landfill areas, use of the paved road (from the landfill entrance) and the internal dirt access

road (from the edge of the pavement to the active face) by commercial haul trucks and local self-haulers in smaller vehicles.

The LSL is permitted to receive up to 1,200 tons of waste per day; including solid and septage waste. In 2003, average peak traffic was 233 vehicles and generally occurred on Saturdays, and average minimum traffic was 128 vehicles and generally occurred on Wednesdays and Thursdays. The LSL received an average of approximately 163 vehicles per day in 2003. The landfill is permitted to receive up to 592 vehicles per day.

Daily operations at the site require the use of a 623 scraper, one D8N dozer, and a 2,000 gallon water truck. The dozer and scraper are used continuously throughout the day. During an average workday, the water truck wets the unpaved roads as needed to minimize fugitive dust. The landfill is open to the public from 8:00 a.m. to 4:30 p.m., but equipment operators may continue to work up to 3.5 hours after closing time to cover the active working face with the required six inches of daily cover.

For the purposes of the air quality analysis, an 8-hour workday was used. The dozer and scraper are used for excavating cover soil and grading the landfill. The scraper is also used for maintaining the access roads between the scalehouse and the active working cell, developing the tipping area (where haul trucks dump their loads into the active area), and stockpiling cover material. Cover material is obtained from the on-site borrow area. Approximately one acre of the landfill is considered active at any one time with the daily active working cell averaging 100 by 150 feet and up to 15 feet in height.

### Existing Emissions

Estimated PM<sub>10</sub> emissions generated by on-site equipment are shown in Table 4. Earthmoving activity consists of moving cover material from the stockpile to the working cell, spreading it around the site, and rolling over it to compact it.

Under the maximum permitted vehicles per day scenario, 592 vehicles are allowed each day to dispose waste material. This number is the maximum number permitted under the existing SWFP. On-site access roads to the active working cell are paved for approximately 0.5 miles from the scalehouse and are unpaved from the 0.5 mile distance to the active working face. Because the location of the active cell varies daily, the distance between the edge of this pavement and working face is estimated to be an average of 0.35-miles roundtrip.

a-b) Existing conditions at the site were screened using the Urban Emission Model 2002 (URBEMIS 2002) prepared by Jones & Stokes under the guidance of the San Joaquin Valley Unified Air Pollution Control District, the Ventura County Air Pollution Control District, and the South Coast Air Quality Management District (SCAQMD). The program generates emissions estimates for land use development projects. Table 4 shows maximum daily operations at the landfill including a total 592 vehicle trips, and use of onsite bulldozer, scraper and water truck for a total of eight hours, and use of a compactor and loader for three hours<sup>3</sup>.

The existing conditions at the Landers Sanitary Landfill include emissions associated with vehicle trips to the site and activities on-site during an 8-hour operating day (i.e. excavation and placement of daily cover). The maximum number of vehicles currently experienced at the Landers Sanitary Landfill is well below the number of vehicles permitted under the SWFP.

Revisions to the existing SWFP will not include an increase in maximum vehicles or tonnage currently permitted at the site. Therefore continued operation of the existing landfill will not result in an increase to criteria pollutants.

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<sup>3</sup> Use of compactor and loader only occurs on high volume days approximately 1 to 2 days per month but are modeled to account for maximum potential impacts.

**Table 4**  
**Landers Sanitary Landfill**  
**Maximum Daily Operations**  
**URBEMIS 2002 Construction Emissions Summary**  
**(Pounds per Day)**

Source	ROG	NOx	CO	PM10
Landfill Operations <sup>1</sup>	3.48	46.46	--	15.90
Maximum vehicle trips	8.85	38.07	134.01	5.74
<b>Totals (lbs/day)</b>	<b>12.33</b>	<b>84.53</b>	<b>134.01</b>	<b>21.64<sup>2</sup></b>
MDAQMD Threshold	137	137	548	82
<b>Significant?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>1</sup> Includes use of bulldozer, scraper, and water truck for a total of eight hours, and use of compactor and loader for a total of three hours per day.

<sup>2</sup> Amount does not include the use of water

The Landers Sanitary Landfill is subject to Rule 403.2 of the MDAQMD, which ensures that National Ambient Air Quality Standards for PM<sub>10</sub> resulting from fugitive dust in the Mojave Desert Planning Area are attained. Some of the requirements that apply under this rule are already part of daily operations at the Landers Sanitary Landfill. Components of this plan include the following requirements.

The owner or operator shall:

- A. Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance;
- B. Take actions sufficient to prevent project-related trackout onto paved surfaces;
- C. Cover loaded haul vehicles while operating on publicly maintained paved surfaces;
- D. Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate Visible Fugitive Dust emissions;
- E. Cleanup project-related trackout or spills on publicly maintained paved surfaces within twenty-four hours; and
- F. Reduce non-essential earth-moving activity under high wind conditions. For purposes of this Rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.

Mitigation measures currently implemented at the Landers Sanitary Landfill to reduce emissions of criteria pollutants associated with landfill operations are included in the existing MMCP. The following measures from the 1999 MMCP will continue to be required and implemented:

- 4.(17.) If the MDAQMD determines that State mandated tests indicate potentially significant impacts to air quality due to the Solid Waste Facility, the ~~County WSD~~ SWMD shall comply with mitigation required by the MDAQMD.

- 5.(18.) Provide adequate access and disposal areas at the facility to reduce the period of time that delivery vehicle engines are required to idle at the site.**
- 6.(19.) Maintain all landfill equipment in proper tune per manufacturers specifications.**
- 7.(20.) SWMD and/or the landfill operator shall secure and comply with all required MDAQMD permits for operation of the Landers Sanitary Landfill facility.**
- 8.(21.) The operator shall comply with Rule 403.2 of the MDAQMD.**

The following mitigation measures are currently being implemented for dust control under the adopted MMCP for the 1999 SWFP and will continue to be required:

- 9.(22.) The operator shall continue its program of maintaining unpaved access roads in proper condition and by frequent watering. The first daily spraying shall be prior to initiating landfill operations at the site and subsequent spraying shall occur as needed during the day to provide adequate dust control.**
- 10.(23.) Water spraying of the work areas (landfill and borrow areas) shall be implemented periodically throughout the day. The facility will require improved dust control during the windy season or when fugitive dust is observed migrating from these areas, utilizing either more frequent applications of water to the dirt roads and working areas or the application of approved dust palliatives.**
- 11.(24.) For areas that are at final grade, revegetation shall be initiated in accordance with the landscape plan required in Mitigation Measure 17 (#3 from the 1999 MMCP). Areas not at final grade but that will not be disturbed for more than three months and are observed to generate fugitive dust, shall be sprayed with dust-binding chemicals or covered with other materials (gravel, plastic, wood chips, etc.) to reduce dust.**

- c-d) Continued operation of the landfill would not exceed MDAQMD thresholds for emissions and therefore would not result in cumulatively considerable net increases in any criteria pollutants. There are no sensitive receptors within the vicinity of the site. Continued implementation of mitigation measures 4 through 11 (17-24 from the 1999 MMCP) would ensure impacts to air quality are below a significant level.
- e) Odors currently emanating off-site from the landfill are minimal. Odor is generally controlled through the placement of daily, intermediate, and final soil cover. Commercial refuse trucks utilizing the site are enclosed or covered. Septage pond odors have not been an issue at this site. No complaints have been documented regarding septage pond odors. If septage pond odors become an issue to off-site receptors, the SWMD will review their operation and initiate mitigation measures as necessary.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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#### IV. BIOLOGICAL RESOURCES — Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION (check if project is located in the Biological Resources Overlay \_ or contains habitat for any species listed in the California Natural Diversity Database \_):

a-e) A biological survey of the Landers Sanitary Landfill site was conducted in 1996 by Circle Mountain Biological Consultants (CMBC) in coordination with a number of surveys for landfill sites in the County. Lilburn Corporation biologists also conducted previous biological surveys at the Landers Sanitary Landfill for plants and wildlife. Surveys showed that the disturbed portion of the site is approximately 89 acres. The remainder of the site is relatively undisturbed and comprised of relatively level areas to the west and mountainous, rocky areas to the south and the east.

Joshua tree woodland occurs throughout the level areas west of the active landfill footprint. There are County ordinances that require salvage or avoidance of Joshua trees. The proposed revisions to the SWFP would not alter the footprint of the landfill and would not result in the destruction or removal of existing trees.

Tortoises could occur outside the active disposal area. The areas most likely to experience tortoise observations are the south and east portions of the landfill property. The BLM estimated densities of 0 to 20 tortoises per square mile for the area, and has designated the area as Category 3 tortoise habitat. Tortoises can be expected to occur anywhere in the rocky areas east and south of the landfill footprint (CMBC, 1996).

According to studies by BLM and the U.S. Fish and Wildlife Service (USFWS), ravens allowed to feed on waste at the landfill are able to extend their desert range and subsequently, their predation on juvenile desert tortoises. Mitigation measures previously recommended require the operator to keep areas of the landfill covered to reduce opportunities for ravens to feed.

According to the biological surveys prepared for the site, no impacts to sensitive or listed plant and wildlife species are anticipated unless expansion into undisturbed areas occurs. This SWFP revision proposes no changes in the landfill footprint or changes to the number of disturbed acres. The proposed project does not include an expansion of the landfill footprint, or any operational changes that may destroy, change, reduce, or affect rare, threatened, or endangered species or their habitat. Therefore, no significant impacts have been identified.

The implementation of Mitigation Measures 15 and 16 from the 1999 MMCP, when required, will continue the protection of any Joshua tree or tortoise population that may eventually be encountered on the site.

**12.(15.)The project is located in an area containing protected desert native plant species, Joshua trees, per San Bernardino County Code Section 89.0420. Removal of any potential desert native plant is subject to procedures set forth in San Bernardino County Code Section 89.0115 pertaining to Removal Permits.**

**13.(16.)A program shall be developed by a qualified biologist(s) to monitor existing raven populations at the San Bernardino County Sanitary Disposal facilities located on public lands. The purpose of this program shall be to determine potential raven habitat and migratory behaviors. Appropriate measures will be developed through implementation of this program to reduce potential habitat at disposal facilities and eliminate and/or reduce existing use of disposal facilities by the raven. This program shall be prepared by the ~~County WSD~~ SWMD in conjunction with the BLM, USFWS, and the California Department of Fish and Game (CDFG) and approved by the LEA and the BLM. All feasible mitigation measures developed through this program shall be incorporated into project design and/or operations. Mitigation measures may include but not be limited to the following:**

- **Removal or alteration of potential perch sites (i.e., building, fences, sign posts, communication and/or power poles) on or near landfill sites.**
- **Use of approved perimeter fencing designed to prevent access to the site by the tortoise and coyote.**
- **Proper screening of areas and/or containers which may be exposed to ravens for any extended duration of time.**
- **Enforce management practices that ensure efficient coverage of refuse and adequate drainage at the landfill to reduce potential food sources for the raven.**

- f) The LSL is not identified within the West Mojave Plan, a habitat conservation plan and California desert conservation area, completed by the BLM. No impact to a Habitat Conservation Plan is anticipated.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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**V. CULTURAL RESOURCES** — Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

SUBSTANTIATION (check if the project is located in the Cultural \_ or Paleontologic \_ Resources overlays or cite results of cultural resource review):

- a-d) The project site consists of a landfill and support functions and is not occupied by any structures, buildings, or objects of cultural value. Continued operation of the facility will result in the deposition of waste on an existing landfill and within an existing permitted footprint. The cover material will continue to be supplied from the borrow area located on-site. There has been no history of prior cultural/paleontological resources being discovered or uncovered on the site. The revisions of the SWFP, including documentation of the landfill's water quality and gas monitoring system, and use of alternative daily cover, will not change existing conditions or significantly impact cultural/paleontological resources.
- c) There are no unique geologic or physical features of special interest at the site. The continued disposal does not have the potential to cause destruction to unique geological features at the site.
- d) Operations at the landfill have not uncovered human remains of any kind. The current landfill footprint would remain intact and only soil excavation for landfill cover material would have the potential to unearth buried remains. Protocols stated in California Health and Safety Code 7050.5(b) such as contacting the County Coroner would be followed in the event human remains are found. No impact is expected.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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**VI. GEOLOGY AND SOILS** — Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION (check ☐ if project is located in the Geologic Hazards Overlay District):

- a) LSL is located within a seismically active region as demonstrated by the Homestead Valley earthquake sequence in 1979 and the Landers earthquake sequence that began in 1992. Surface rupture was identified in the region following both of these earthquakes. Surface rupture zones from the Homestead Valley earthquake were mapped approximately six miles northwest of the LSL (Hawkins and McNey, 1979). Surface rupture zones associated with the 7.3-magnitude Landers earthquake were identified as close as 3.4 miles from the LSL, with surface rupture occurring on the Johnson Valley, Homestead Valley, and Camp Rock-Emerson faults (California Division of Mines and Geology [CDMG], 1993). Aftershocks of the Landers earthquake event continue to impact the region.

Numerous faults and shear zones have been identified at LSL. The dominant structural geologic feature at the site is an unnamed northwest-trending fault zone identified from surface exposures in the eastern portion of the site and the borrow area that is located southeast of the active landfill. This fault zone has been referred to in previous LSL investigations as the Nason Dixon fault. The Nason Dixon fault extends southeasterly from the site for a distance of about 10.5 miles. Based on geophysical data, geologic mapping, and lineament analyses, the fault is interpreted to extend northwest from the active landfill. Field investigations southeast of the active landfill have revealed evidence that suggests probable Holocene movement within the Nason Dixon fault zone. No evidence of Quaternary movement has been identified for the other mapped faults at LSL.

The operation of LSL consists of placement of wastes at the active face of the landfill. The waste is then compacted to provide a uniform depth of material. Soil is placed over the waste at the end of each day and

compacted by heavy equipment. The compacted waste would not provide adequate support for structures. No habitable structures exist on the compacted fill areas.

No structures are proposed for construction as a result of project implementation. Operational changes including the use of approved alternative daily covers and upgrades to the landfill gas monitoring system and groundwater monitoring systems would not alter the existing design of the landfill. No changes to the landfill footprint or on-site slopes are proposed within the SWFP revision.

As stated in Title 23, Chapter 15 of the California Code of Regulations (CCR), earthquake faults are regarded a significant hazards for landfill locating, and as such, must be designed to withstand the maximum probable earthquake (for Class III Waste Facilities) without damage to foundations or structures which control leachate, gas, surface drainage and erosion. The adherence to state law concerning environmental control structures located on landfill sites would reduce hazards regarding earthquakes to less than significant. The following statute was included as a mitigation measure within the 1997 Initial Study and the 1999 MMCP, but because it is a State law, and is mandatory for compliance if any of the following systems are installed on-site: landfill liners, landfill gas systems, anti-migration systems, or concrete drainage channels, it is being proposed for deletion as mitigation measure within this Initial Study. The design of the LSL meets the requirements of Title 23, Chapter 15, Section 2547 (a).

~~1. All Waste Management Units (WMU) are required by State Law (Title 23, Chapter 15, Section 2547 (a)) to be designed to withstand the maximum probable earthquake or maximum credible earthquake without damage to the foundations or structures which control leachate, gas, surface drainage and erosion. Any landfill liners, LFG, anti-migration systems, or concrete drainage channels which may be constructed at the Landers Facility in the future shall be designed to withstand the maximum probable earthquake.~~

- b) The LSL has erosion control measures in place and additional measures for increased protection against potential erosion would be constructed upon approval of the Solid Waste Facilities Permit. Currently, the drainage control system for the LSL consists of unlined drainage channels around the active landfill area. These channels are mostly trapezoidal in cross section and discharge into the narrow valley at the northwestern end of the active landfill. The closed cells of the active landfill are covered and graded so that precipitation onto the surface drains along the top of the landfill toward the west and onto the working face. A diversion berm and drainage channel was constructed along the southern and northern perimeters of the two lined, Class II surface impoundments to divert runoff from the ridges to the southwest and northwest. Landfill side slopes are generally 3(h):1(v) (horizontal to vertical) or flatter. The top deck area has a slope of 2.5 to three percent to prevent water from ponding on the top of the deck.

In addition, downslope drains and perimeter drainage channels would also collect other runoff from the landfill site. Perimeter drainage channels would be constructed along the toe of slopes and access roads of the landfill. The perimeter channels would also collect runoff from areas adjacent to the landfill. The perimeter channels would convey rainfall runoff toward the northwest corner of the site into existing natural drainage channels.

The permanent drainage control facilities on-site to be constructed as part of the facility's Final Closure would be designed to convey the peak discharge resulting from the 100-year, one-hour precipitation event. The peak discharge for each channel and drainage structure would be calculated by the Rational Method consistent with the San Bernardino County Hydrology Manual. Perimeter drainage swales and downdrain structures would be analyzed by open channel hydraulics. Typical corrugated metal pipe (CMP) rectangular flumes would be used for downdrains. Perimeter drainage ditches would be constructed as concrete channels with trapezoidal cross-sections. Riprap outlet erosion protection is anticipated for all drainage outlets. In addition, all drainage channels would be constructed to comply with Title 23, Chapter 15, Section 2547 (a), of the California Code of Regulations. The following mitigation measure would ensure the proper installation of the erosion control structures and combine the use of vegetation for the control of topsoil loss:

**14.(3.) To control the loss of topsoil and provide erosion control, a revegetation/landscape plan shall be prepared for the Landers Sanitary Landfill by a qualified landscape architect or biologist with experience using native vegetation. This plan shall be completed within one year after approval of the permit revision and shall be designed for implementation of a comprehensive landscape plan that will provide an effective vegetative cover over the long-term. The plan shall provide for an effective vegetative cover with native drought tolerant vegetation on disturbed surfaces in those portions of the site where disposal activities have ceased. An effective vegetation cover shall be fifty (50) percent coverage of the revegetated areas without permanent irrigation after a five (5) year period.**

Mitigation measure #2 from the 1999 MMCP is proposed for deletion as the mitigation has been performed as presented in the Preliminary Closure and Post Closure Maintenance Plan as revised in April of 1995:

~~**2. Final slopes shall be revegetated with native plant species, primarily grasses and shallow-rooted shrubs at the earliest possible time to reduce contrast with the surrounding environment, stabilize slopes from erosion, and control topsoil loss.**~~

Mitigation measure #5 from the 1999 MMCP is proposed for deletion as the mitigation has been performed as presented in the Preliminary Closure and Post Closure Maintenance Plan as revised in April of 1995:

~~**5. The County shall prepare the Comprehensive Drainage Design for the ultimate landfill configuration as part of the Preliminary Closure/Postclosure Maintenance Plan. This design shall include minimizing runoff from elevated portions of the landfill, providing an adequate surface runoff collection system to minimize on-site erosion; installing adequate sedimentation basins to prevent down stream siltation/deposition; and identifying remedial measures to be implemented if erosion occurs on landfill side slopes during severe precipitation events.**~~

- c-d) The remote location of the site, the distance to habitable structures, and the limited number of people on-site alleviate impacts to people or property from geologic hazards. The existing 3h:1v slopes minimize the potential for instability during a seismic event. The existing potential for liquefaction at the site is extremely low due to the depth to groundwater, which is more than 460 feet below the ground surface.

Geologic hazards, such as subsidence, landslides, and rockfalls are not naturally present at the site. All construction activities are properly engineered and inspected to avoid slope failures or rock slides due to undercutting. All buildings on-site have been constructed according to the Uniform Building Code and to any other applicable standards regarding seismic safety. Unstable or expansive soils would not pose a significant threat to continued on-site operations. The following mitigation measure from the 1999 MMCP would be implemented if slopes greater than 3h:1v are proposed on-site:

**15.(4.) The County shall have a qualified Geotechnical consultant prepare a stability analysis of the Landers Sanitary Landfill if a slope ration steeper than 3h:1v would be utilized at the site. Any measures required in the geotechnical study to ensure that the Landfill does not cause a threat to life or adjacent property shall be implemented.**

- e) Sanitary facilities provided for employees and visitors consist of a chemical toilet with built in hand-washing capabilities. No septic systems are proposed as part of the project.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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## VII. HAZARDS AND HAZARDOUS MATERIALS —

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### SUBSTANTIATION:

- a-d) The Class III, LSL accepts residential, commercial, industrial, agricultural, construction, demolition and other non-hazardous inert wastes. Disposal of hazardous, explosive, or toxic substances is not allowed at the active landfill. A load-checking program is currently in place to screen wastes arriving for disposal both at the main gate and at the active face. If illegal substances are found within a loaded vehicle the load is refused and the vehicle turned away. If equipment operators discover illegal substances while working the active face the materials are categorized and segregated from the tipping area. Once

segregated from the tipping area the materials are stored for a period not to exceed 90 days and are then transported to a treatment storage disposal facility for disposal.

Another potential hazard associated with a solid waste landfill is exposure to landfill gas (LFG). LFG is primarily composed of carbon dioxide and methane, and can be explosive at concentrations of between five percent and fifteen percent. Pursuant to Section 20919.5, Title 27 CCR, a quarterly methane-monitoring program was implemented at the LSL site and includes eleven LFG migration-monitoring probes. All LFG monitoring probes and on-site structures are monitored in accordance with regulatory requirements. Currently, LFG is monitored quarterly, and results of probe and on-site structure monitoring are reported to the LEA and MDAQMD. Each report includes methane concentrations, documentation of sampling conditions, instrumentation utilized and a brief description of methods. The monitoring reports include pressures measured in the LFG probes and barometric pressure.

Perimeter probe monitoring results for the fourth quarter of 2003 revealed methane gas concentrations to be well below Rule 1150.1, and state standards, at the landfill. It is anticipated that the monitoring program will continue for a period of thirty years after the final closure of the landfill or until landfill gas production ceases.

The LSL is not located within one-quarter mile of a school site and is not included as part of a hazardous waste site. The implementation of LFG monitoring, the load-checking program, temporary storage of illegally dumped hazardous wastes, and following procedures identified in the Business Emergency Contingency Plan such as adequate first aid supplies, would ensure impacts associated with hazardous materials remain at less than significant levels. The following mitigation measures included as part of the 1999 MMCP are included here to ensure protection of the public from hazardous materials:

**16.(11.) WSD SWMD shall ensure that adequate on-site first aid supplies and hygienic facilities are maintained at Landers Sanitary Landfill.**

**17.(14.) The County shall implement any recommended leachate and LFG controls required by the RWQCB, Colorado River Basin Region, to ensure that potential health risks to on-site personnel and adjacent property are not adversely impacted from the exposure to leachate or LFG.**

Mitigation Measures 9, 10, 12, and 13 are proposed for deletion from the LSL 1999 MMCP as they have been included within the daily operations conducted on the landfill property and are followed and documented in daily logs maintained by on-site personnel which are routinely reviewed by the LEA.

~~**9. The WSD shall continue its loadchecking program to ensure hazardous wastes are not disposed of at the active working face of the landfill.**~~

~~**10. WSD shall continue to provide adequate containers for the temporary storage of hazardous wastes illegally disposed of at Landers Sanitary Landfill.**~~

~~**12. WSD shall provide a comprehensive training program for disposal site personnel in the safe handling and storage of hazardous wastes.**~~

~~**13. Proper operation of the facility shall include regular inspection of the disposal working areas to ensure that adequate compaction and cover of refuse has eliminated both habitat and food for flies and rodents. If these inspections reveal the presence of pests on-site, a pest control specialist shall be brought to the site to implement appropriate measures to control this health nuisance.**~~

- e-f) The LSL is not located within an airport land use plan. No public or private airstrips exist within the vicinity of LSL.
- g) As required by the County Fire Agency, LSL has prepared a Business Emergency/Contingency Plan that includes a list of the amount and types of hazardous wastes stored on-site, a list of emergency contacts for the site, and evacuation procedures and routes to be used during any emergency. Each employee is also provided with safety equipment such as hard hats, gloves, reflective vests, and ear and eye protection. In addition, on-site personnel are trained in the identification and handling of hazardous wastes, and are given training courses in the various aspects of on-site operations, potential hazards, and safety procedures. The continued operation of LSL would not affect any local, or regional emergency response plans for the Landers area.
- h) LSL is not located in a wildland fire hazard area. Fuel for operating equipment is delivered to the site and is not stored on-site. Spark arresters and fire extinguishers are installed on all equipment to reduce the potential for ignition of wildfires and for fire suppression. The load-checking program ensures combustible materials are not accepted or disposed of at the site. In addition, a 150-foot vegetation clearance is maintained around the entire perimeter of the landfill footprint to decrease the risk of wildland fire. Any accidental fire on-site could also be suppressed through the use of the on-site equipment such as the bulldozer, which would suffocate the fire with soil, or the water truck. No impact from loss, injury, or death involving wildland fires is expected at LSL.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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**VIII. HYDROLOGY AND WATER QUALITY** — Would the project:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### SUBSTANTIATION:

- a/f) Groundwater impacts at LSL were first identified during the SWAT investigation in 1988-1989, when the first six groundwater monitoring wells were installed. Groundwater samples from a well located adjacent to the active landfill area were found to be impacted by Volatile Organic Compounds (VOCs), while elevated inorganic constituents (particularly nitrates) were found in samples from wells near the previously operational, now clean closed, septage impoundments. Historically, some of the impacts locally exceeded the Federal Maximum Contaminant Levels (MCLs) established by the U.S. Environmental Protection Agency. In response to these conditions, and to better characterize groundwater conditions at the site, six additional wells were installed in 1995, two wells were installed in 1996, and four wells and two piezometers were installed in 1997.

Each well is sampled on a quarterly basis as required in the facility's Detection Monitoring Program (DMP). Historically, the most significant VOC impacts have been identified in samples from well L-3, which is located in or near the Nason Dixon fault zone and downgradient of the northwestern portion of the active landfill. The most significant inorganic impacts have been identified in samples from wells L-9 and L-16, which are located downgradient of the former septage ponds. During a detailed Hydrogeologic and Geologic Characterization Study, two separate sources have been identified in relation to groundwater impacts at the site: the former septage disposal area appears to be the source of inorganic impacts near wells L-9 and L-16, and the active landfill area appears to be the source for VOCs near well L-3.

Available groundwater elevation data indicate the presence of an area of relatively high groundwater elevation beneath the former septage disposal area. This mound has been attributed to infiltration of liquids that were discharged to the previous unlined septage ponds. As expected, groundwater elevations in monitoring points located near the former septage disposal area have decreased since discharge to the ponds ceased in 1995. Inorganic constituent concentrations (chloride, nitrates, and total dissolved solids) are typically the highest in samples from a well located in the groundwater mounding area, and the concentrations for these constituents generally decrease with distance from the mound. Further support for the former septage disposal area as a source for groundwater impacts is indicated by the historical detection of compounds that are commonly associated with chemical toilet waste.

The groundwater impacts identified at the northwestern portion of the active landfill are differentiated from the septage release by the absence of mounding groundwater, inorganic constituent concentrations that are typically similar to background concentrations, and the different suite of VOC constituents in groundwater samples. Groundwater impacts in samples from wells located near the northwestern portion of the landfill are interpreted to be associated with landfill gas. Liquid migration to groundwater does not appear to be a contributor to groundwater impacts in this area. This interpretation is supported by the fact that inorganic constituent concentrations in this area are consistent with background concentrations, and the suite of VOCs detected in gas samples from wells located in this area are similar to VOCs identified in groundwater samples from well L-3 in the active landfill area. Inspection of time-series plots for wells in this area indicate that with the exception of VOC concentrations in samples from well L-3, the groundwater impacts adjacent to the landfill have generally remained static, with some minor seasonal fluctuations. Most of the VOC concentrations in samples from well L-3 have been increasing since 1999. The presence of anaerobic conditions that are expected adjacent to the landfill and the lower VOC concentrations measured in samples from more distant wells suggest that VOCs degrade within a relatively short distance from the landfill.

Together with VOCs, the presence of elevated concentrations of inorganic constituents indicates that groundwater impacts in the vicinity of the former septage disposal area are associated with the historical migration of liquids discharged to the former septage impoundments. SWMD completed an evaluation of dilution-attenuation relationships of inorganic constituents in groundwater beneath the site in order to develop an estimate of the time that may be required for impacted water to achieve background concentrations. The model concluded that the inorganic constituent concentrations would attenuate to background levels in five to fifteen years after clean closure. Since the ponds were clean closed in 1998, modeling indicates achievement of background concentrations by the year 2013.

Modeling was also completed using the BIOCHLOR model to assess potential migration and VOC attenuation conditions near the areas impacted by landfill gas. The model results indicate that the VOCs are expected to degrade to near non-detectable concentrations within about 2,500 feet of the landfill and to below federal and state MCLs within about 1,500 feet.

The summary for the Water Quality Monitoring Report prepared in February of 2004 by Geologic Associates, stated that based on the continued occurrence of elevated inorganic and organic constituent concentrations, it is concluded that the LSL has contributed to the degradation of local groundwater quality. In response to the indications of a release at the LSL, SWMD is in the process of implementing an Environmental Management Plan (EMP) to further assess site conditions and the nature and extent of the apparent release.

SWMD completed an Engineering Feasibility Study (EFS) for Corrective Action to determine an appropriate response to impacted groundwater conditions identified at LSL. The EFS addressed both in-situ and ex-situ remedial technologies, and considered potential remedial alternatives to separately address groundwater impacts that are associated with both liquids from the former septage ponds and landfill gas from the active waste cell. Based on the technical and cost evaluation, it was concluded that intrinsic bioremediation is the most appropriate response to site conditions.

Findings concluded that potential impacts to groundwater resources occurred due to past landfilling activities and the continued operation of the landfill until the estimated closure date of 2011 would generate sufficient funding through tipping fees to fund the required monitoring, remediation, and final closure of the landfill. Final closure of the site would further eliminate potential for precipitation to collect and leach through the landfill into the underlying sediments and ultimately, to the groundwater table. The actions currently being taken during the operational phase of the landfill would benefit the groundwater resources in the vicinity of the project site. No additional potentially adverse impacts are expected upon approval of the permit extension. No further mitigation could be proposed at this time than what is being conducted currently which includes loadchecking, monitoring of LFG and groundwater, and past clean closure of the septage impoundments.

Upon clean closure of the septage impoundments in 1995, two lined Class II surface impoundments, including a leak detection system, were constructed on an approximate three-acre portion of the site. The design for the Class II Surface Impoundments was conducted under the direction of a registered civil engineer and other professionals as needed for the disciplines required for geology, hydrology, engineering design, and construction quality assurance services. Because no liquid waste is allowed to infiltrate into the subsoil (lined impoundments with leak detection), increasing the quantity of liquid waste received will have no impact on groundwater. The Class II surface impoundments meet the requirements of Title 27 of the California Code of Regulations and are permitted to accept all liquid designated wastes that are not chemically incompatible with the liner material.

Signage has been placed at the entrance gate, scalehouse, and impoundment area indicating only septic, chemical toilet, car wash clarifier, and grease trap wastes are permitted in the impoundments. Literature has also been given to pumper/haulers to notify them of the types of wastes acceptable within the impoundments. These actions aid in limiting the potential discharge of unacceptable wastes to the impoundments and prolonging their operational life. The two lined, Class II surface impoundments and the clean closed septage impoundment area are inspected monthly. In 1996, a vadose zone monitoring system was installed, and consists of eight wells located around the Class II surface impoundments. The vadose zone around the lined impoundments is monitored quarterly for moisture in compliance with Section 2550.7, Title 23 of the CCR. Quarterly soil moisture monitoring is performed to determine whether liquid from the septage impoundments is penetrating the liners and infiltrating the soil. The monthly inspections are performed to determine the condition of the impoundments and impoundment vicinity as well as to detect any liquid in the vadose zone. The proposed increase in liquid waste from 96 tons per day to 200 tons per day, would not increase the potential for groundwater contamination.

- b-e) LSL does not pump water from the underlying aquifer. Water for dust control is purchased through the Landers Water District from an off-site hydrant. Continued operation of the LSL would not impact the average annual quantity of groundwater pumped by the Landers Water District as no increase in the landfill operational footprint is proposed. The current drainage control system consists of unlined, trapezoidal drainage channels around the active landfill area which collect rainfall and direct runoff into existing natural drainage channels. Most slopes for the active landfill site are graded at a 3h:1v gradient to avoid potential slope damage due to excessive runoff. The deck area of the active face is graded with a two to three percent slope to minimize ponding of water and to facilitate the collection of water into perimeter drainage channels. Drainage improvements are included as part of this SWFP process. Additional drainage channels are proposed for construction at the landfill site including perimeter drainage channels along the toe of slopes and along access roads upon site closure. The additional drainage structures would be designed to convey the peak discharge resulting from the 100-year, one-hour precipitation event. The peak discharge for each channel and drainage structures would be calculated by the Rational Method consistent with the San Bernardino County Hydrology Manual. Perimeter drainage swales and downdrain structures would be analyzed by open channel hydraulics. Typical corrugated metal pipe rectangular flumes would be used for downdrains. New perimeter drainage ditches would be concrete channels with trapezoidal cross-sections. Riprap outlet erosion protection is anticipated for all drainage outlets. Natural off-site drainage patterns have and will continue to convey flows away from any currently inhabited structures. Present drainage structures in combination with proposed drainage control structures would alleviate the impacts from flooding or erosion in the vicinity of the LSL.
- g-h) LSL is not in the 100-year flood hazard zone, but drainage channels on-site are designed to handle the runoff from the 100-year storm event. No impact is expected due to 100-year flood flows.
- i) No levees or dams used to contain significant amounts of water are located within the area. LSL is located within the Mojave Desert and receives an average precipitation of 4.12 inches with evaporation rates that can exceed 100 inches. No standing bodies of water exist near the site. No impact from flooding or inundation due to failure of a dam or occurrence of a seiche is expected.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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**IX. LAND USE AND PLANNING** — Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**SUBSTANTIATION:**

- a) The established LSL occupies 637.92 acres of land two miles south-southeast of the community of Landers. The landfill has operated in its current location since 1965 and will not divide any of the established surrounding community. No impact is expected.
- b) The area surrounding the landfill site is designated Rural Living – five acre minimum lot size (RL-5) and Resource Conservation (RC) by the County General Plan. The improvement levels on the General Plan Infrastructure Overlay for the site an adjacent property is IL4 and IL5. These improvement levels signify areas with low development and areas where only limited low-density development is anticipated due to resource constraints and/or a desire to maintain a rural living environment. The landfill footprint would not change due to SWFP approval; no impact is expected to land use plans or policies.
- c) LSL is not identified within the West Mojave Plan, a habitat conservation plan and desert conservation area, completed by the BLM. No impact to a Habitat Conservation Plan is anticipated.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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**X. MINERAL RESOURCES** — Would the project:

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?                                | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**SUBSTANTIATION** (check \_\_\_ if project is located within the Mineral Resource Zone Overlay):

- a-b) The landfill site is not located within the Mineral Resources Zone Overlay of the San Bernardino County General Plan. Borrow areas located within the landfill footprint provide cover material lacking characteristics of commercial grade aggregate. No impact on mineral resources would occur.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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**XI. NOISE** — Would the project result in:

- |   |                          |                                     |                                     |                                     |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

SUBSTANTIATION (check if the project is located in the Noise Hazard Overlay District \_\_\_\_ or is subject to severe noise levels according to the General Plan Noise Element \_\_):

- a-d) LSL has been established at its current site since 1965. The landfill is located two miles south-southeast of the town of Landers in a sparsely populated desert community. No structures exist within 1000-feet of the operational landfill. No sensitive receptors such as schools or acute care facilities reside within the general area; operational hours of the landfill are confined to daylight hours between 7 a.m. and 8 p.m. Noise levels and vibrations generated from the site would not exceed existing operational levels currently generated by the equipment implemented on-site. Practices employed on-site include noise attenuation devices on all operating equipment and hearing protection for workers in accordance with all applicable standards (i.e. Cal-OSHA). No impact is expected with regards to existing noise or vibrations emanating from the site and increases in site activities are not expected. If the operator must implement nighttime hours to accommodate recycling activities written notification must be given to the Lead Enforcement Agency prior to commencement of any nighttime hour activities. Should nighttime activities be required the following mitigation measures shall be implemented:

**18.(8.) Should night operations be undertaken to support recycling requirements, the County WSD SWMD shall monitor noise levels for a minimum of two weeks when operations begin, to ensure that a 50dBA sound level is not exceeded at the nearest sensitive receptor location as a result of such activities. If said noise levels are exceeded at sensitive receptor locations, the County shall require noise attenuation buffers to be installed to reduce noise levels to a 50-dBA threshold.**

The following mitigation measure was included as part of the 1999 MMCP to ensure noise levels remain below significant thresholds to off-site receptors:

**19(6.). All equipment shall be operated with required noise attenuation devices (such as mufflers) based on regulations in place at the time of use.**

Based on regulations implemented by the California Occupational Safety and Hazard Association requiring hearing protection for workers subject to noise levels, which, over an extended period of time, could cause hearing loss, the following mitigation measure from the 1999 MMCP is proposed for deletion:

~~**7. Employees shall be provided with hearing protection devices if any potential exists that they may be exposed to noise levels that could harm hearing. The County shall institute a program to insure that hearing protection devices are implemented by employees where hearing threats exist.**~~

e-f) The LSL is not located within an airport land use plan or in the vicinity of a public or private airport.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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## XII. POPULATION AND HOUSING — Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### SUBSTANTIATION:

- a-c) LSL currently employs seven full-time employees and six part-time, on-call employees. The seven full-time employees include: a site supervisor, equipment operators, load checkers, scale operators, and laborers. The six part-time employees are used for litter control on and around the landfill. The SWFP approval would not create a need for additional employees or displace housing, as the landfill footprint will not change. No impact to population or housing would occur.

## XIII. PUBLIC SERVICES —

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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objectives for any of the public services:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### SUBSTANTIATION:

a) Fire Protection- No increase in the landfill footprint is proposed. The current business emergency/contingency plan addresses potential situations regarding fire hazards and the response required by on-site personnel. Each piece of equipment and the on-site building (the scalehouse) are supplied with fire extinguishers to respond to fire hazard situations. Operational activities and the 150-foot firebreak surrounding the site leave much of the active landfill devoid of flammable vegetation. Potential fires at the active face of the landfill can be suppressed by the bulldozer using soil to cut air to the fire or through the use of the on-site water truck. No increase in the amount of fire protection services would be required at the LSL.

Police Protection- Disposal operations at LSL have historically, not required police or County sheriff services. The entrance gate is locked during non-operating hours. Unauthorized access to the landfill is controlled by the gate at the landfill entrance and by perimeter fencing. The continued operation of the landfill would not require additional police protection.

Schools- The continued operation of the landfill would not induce population growth, which could have an affect on the local school system. No impact is expected.

Parks- The landfill would not have an affect on park or recreational facilities within the general area. No growth in the local population would occur requiring additional recreational areas, nor would existing parks be affected by continued landfill operation.

Other Public Facilities- The continuation of disposal operations at LSL would not create any changes to the agencies that provide oversight duties. These agencies include: the County Solid Waste Management Division, California Integrated Waste Management Board, Regional Water Quality Control Board, Colorado River Basin, and the County Department of Public Health, Division of Environmental Health Services. Services provided by these agencies are routine responsibilities and no additional impact is expected on these agencies.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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#### XIV. RECREATION —

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

#### SUBSTANTIATION:

- a/b) The continuation of landfilling operations at the Landers facility would not induce population growth or create significant amounts of additional jobs. No increase in the need for, or the use of, existing recreational facilities would occur through continued operation of LSL.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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#### XV. TRANSPORTATION/TRAFFIC — Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Result in inadequate parking capacity?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

## SUBSTANTIATION:

- a-b) No public access roads exist within the property occupied by the landfill. Trips are made to the landfill for a specific purpose and must undergo inspection and weighing before access is granted. Vehicles entering the site include septic pumpers, packer trucks, transfer trailers, roll-off container trucks, pick-up trucks and automobiles. Traffic is controlled by on-site personnel and signage. In 2003, average peak traffic was 233 vehicles, which generally occurred on Saturdays, and average minimum traffic was 128 vehicles generally occurring on Wednesdays and Thursdays. The traffic patterns at LSL equated to an average of 163 vehicles per day for 2003. The landfill site is permitted to receive a maximum of 592 vehicles per day. Currently, the landfill experiences an average of only 28 percent of its permitted maximum allowance for vehicle traffic. The proposed increase in liquid waste would result in a maximum of 10 additional liquid waste hauling trucks per day based on a 5,000 gallon capacity rating for the trucks. This increase is anticipated to have a less than significant impact on permitted traffic, because waste of this type is received in septic pumpers (at 20 tons per vehicle) versus packer trucks (10 tons per vehicle) and individual pick-up trucks (750 lbs per vehicle) which make up a majority of the daily traffic trips. No increase in total vehicles per day permitted is anticipated. Traffic is expected to increase at a rate of three percent per year, which by the year 2011 would be 189 vehicles per day, approximately 32 percent of permitted daily trips. The low-density residential land use and limited population within the area alleviate adverse impacts due to traffic flow. No adverse impact to the level of service or traffic flow within the area is expected.
- c) The continued operation of the landfill would not affect air traffic patterns.
- d-e) No new design features associated with traffic would be added to the current landfill facility. All current operating procedures for ingress and egress would remain in place. The entrance/exit to the landfill provides sufficient access for emergency vehicles in case of any emergency. In addition, on-site personnel are given sufficient training to adequately address most on-site emergencies. No impact is anticipated to emergency access for vehicles or dangerous design features.
- f) Adequate parking is available on-site and is capable of accommodating future needs of the facility. No additional parking would be required at the landfill site.
- g) The remote, sparsely populated desert setting in the region of the landfill precludes the use of alternative transportation within the region. Additionally, disposal of inert municipal waste or construction debris requires the use of vehicles, which can accommodate these types of loads, limiting the utilization of alternative transportation types such as buses or bicycles.

Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
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## XVI. UTILITIES AND SERVICE SYSTEMS — Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**SUBSTANTIATION:**

- a-b/e) The landfill is not served by a wastewater treatment provider. No sewer system exists on the site. A portable chemical toilet is used on-site for sanitary facilities. No impacts to wastewater treatment providers are anticipated.
- b) LSL does not impact any public storm water drainage systems. The existing drainage system was designed to handle the 100-year, one-hour storm event. The additional storm drainage features proposed as part of the PCPMP would also increase the ability of the current drainage system to convey storm water runoff away from critical areas such as closed cells of the landfill, the toes of slopes, and along access roads. All storm water discharges are directed into natural, off site drainage channels and do not affect public storm water systems. No impact is expected.
- d) Potable water is not supplied to the site. Employees use bottled drinking water for personal needs and water for dust control is purchased from Landers Water District. Water for dust control is obtained from a Landers Water District water hydrant located one mile away from the site. No expansion of the landfill footprint or in accepted solid waste is proposed which would require additional amounts of water; no impact is anticipated.
- f-g) The solid waste stream generated by on-site personnel is minimal and can be disposed of at the current active face of the LSL. Current projections estimate the operational capacity of the landfill to be approximately until 2011. LSL can accommodate the current waste stream generated on-site and will continue to operate as a regional landfill for the east Desert Region of the County. All applicable federal, state, and local statutes are followed at the landfill and compliance is monitored and documented for all regulatory agencies. No impact is expected.

## XVII. MANDATORY FINDINGS OF SIGNIFICANCE—

- |  |                          |                                     |                                     |                          |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

### SUBSTANTIATION:

- a) Impacts to aesthetics and scenic resources from litter, light and glare will be mitigated to less than significant. Air Quality impacts from dust and vehicle emissions will be mitigated through compliance with MDAQMD rules.

According to the biological surveys prepared for the site, no impacts to sensitive or listed plant and wildlife species are anticipated unless expansion into undisturbed areas occurs. This SWFP revision proposes no changes in the landfill footprint or changes in the number of disturbed acres. The proposed project does not include an expansion of the landfill footprint, or any operational changes that may destroy, change, reduce, or affect rare, threatened, or endangered species or their habitat. Therefore, no significant impacts have been identified.

Similarly, studies performed by BLM and the U.S. Fish and Wildlife Service (USFWS) indicated that ravens allowed to feed on waste at a landfill were able to extend their desert range and subsequently, their predation on juvenile desert tortoises. Mitigation proposed at the landfill site includes developing a program to monitor existing raven populations and determine potential raven habitat and migratory behaviors. Specific recommendations made within the program must include: removal of perch sites, perimeter fencing to preclude access to tortoise and coyote, screening of areas exposed to ravens, efficient coverage of refuse and other food sources for ravens.

In addition, Joshua tree woodland occurs throughout the level areas west of the active landfill footprint. County ordinances require salvage or avoidance of Joshua trees. The landfill is required to follow San Bernardino County Code Sections 89.0420 and 89.0115 relating to the protection and permitting for removal of Joshua trees. Mitigation implemented as conditions of approval make the impact regarding rare, threatened, endangered, or protected plants and wildlife less than significant.

The landfill and support functions are not occupied by any structures, buildings, or objects of cultural value. No history of prior cultural/paleontological resources have been discovered or uncovered on the

site. The revisions to the SWFP, including documentation of the landfill's water quality and gas monitoring system, increase in the quantity of liquid waste received, and use of alternative daily cover, would not change existing conditions which would significantly impact cultural or paleontological resources.

- b) LSL is located two miles south-southwest of the town of Landers; a sparsely populated, rural, desert community. The landfill has been in operation since 1965 at its current location. With the exception of an increase in liquid waste from 96 tons per day to 200 tons per day, to allow for future growth, no change in the landfill footprint or daily maximum permitted tonnage is proposed as part of the SWFP revision. Impacts described herein and in previous Initial Studies are expected to remain at existing levels. No cumulatively considerable impacts are expected.
- c) Potential impacts to groundwater resources exist from the unlined septage impoundments. Management actions proposed should benefit the groundwater resources in the vicinity of the project site. Significant adverse impacts to humans are considered less than significant.

Geologic conditions at the site will be adequately mitigated so that there will be no significant risk to people at the landfill. Exposure to hazardous materials and noise has been mitigated to below a level of significance through measures included in the health and safety operations procedures and noise attenuation devices.

## **XVIII. MITIGATION MEASURES**

Mitigation measures that will remain as part of the new permit revision application have been renumbered with the old number identified in parenthesis for easy reference between previous documents. Any revisions to text have been identified with strike-through. A detailed description of changes to the 1999 MMCP is included in Table 5 Summary of Changes to Mitigation Measures, at the end of this section.

- 1.(25.) Maintain at least two permanent crewmembers each day to pick up litter both on and off-site that has escaped the control devices.**
- 2.(26.) Implement the use of portable litter fencing during periods of high wind conditions to control the migration of litter from the site.**
- 3.(27.) All exterior lighting, either permanent or temporary, shall consist of low-intensity sodium vapor lamps. All lights shall be shielded to ensure that the area of illumination is confined to the landfill or County property boundaries.**
- 4.(17.) If the MDAQMD determines that State mandated tests indicate potentially significant impacts to air quality due to the Solid Waste Facility, the ~~County WSD~~ SWMD shall comply with mitigation required by the MDAQMD.**
- 5.(18.) Provide adequate access and disposal areas at the facility to reduce the period of time that delivery vehicle engines are required to idle at the site.**
- 6.(19.) Maintain all landfill equipment in proper tune per manufacturers specifications.**
- 7.(20.) ~~WSD~~ SWMD and/or the landfill operator shall secure and comply with all required MDAQMD permits for operation of the Landers Sanitary Landfill facility.**
- 8.(21.) The operator shall comply with Rule 403.2 of the MDAQMD.**

- 9.(22.) The operator shall continue its program of maintaining unpaved access roads in proper condition and by frequent watering. The first daily spraying shall be prior to initiating landfill operations at the site and subsequent spraying shall occur as needed during the day to provide adequate dust control.
- 10.(23.) Water spraying of the work areas (landfill and borrow areas) shall be implemented periodically throughout the day. The facility will require improved dust control during the windy season or when fugitive dust is observed migrating from these areas, utilizing either more frequent applications of water to the dirt roads and working areas or the application of approved dust palliatives.
- 11.(24.) For areas that are at final grade, revegetation shall be initiated in accordance with the landscape plan required in Mitigation Measure 17 (#3 from the 1999 MMCP). Areas not at final grade but that will not be disturbed for more than three months and are observed to generate fugitive dust, shall be sprayed with dust-binding chemicals or covered with other materials (gravel, plastic, wood chips, etc.) to reduce dust.
- 12.(15.) The project is located in an area containing protected desert native plant species, Joshua trees, per San Bernardino County Code Section 89.0420. Removal of any potential desert native plant is subject to procedures set forth in San Bernardino County Code Section 89.0115 pertaining to Removal Permits.
- 13.(16.) A program shall be developed by a qualified biologist(s) to monitor existing raven populations at the San Bernardino County Sanitary Disposal facilities located on public lands. The purpose of this program shall be to determine potential raven habitat and migratory behaviors. Appropriate measures will be developed through implementation of this program to reduce potential habitat at disposal facilities and eliminate and/or reduce existing use of disposal facilities by the raven. This program shall be prepared by the ~~County WSD~~ SWMD in conjunction with the BLM, USFWS, and the California Department of Fish and Game (CDFG) and approved by the LEA and the BLM. All feasible mitigation measures developed through this program shall be incorporated into project design and/or operations. Mitigation measures may include but not be limited to the following:
- Removal or alteration of potential perch sites (i.e., building, fences, sign posts, communication and/or power poles) on or near landfill sites.
  - Use of approved perimeter fencing designed to prevent access to the site by the tortoise and coyote.
  - Proper screening of areas and/or containers which may be exposed to ravens for any extended duration of time.
  - Enforce management practices that ensure efficient coverage of refuse and adequate drainage at the landfill to reduce potential food sources for the raven.
- 14.(3.) To control the loss of topsoil and provide erosion control, a revegetation/landscape plan shall be prepared for the Landers Sanitary Landfill by a qualified landscape architect or biologist with experience using native vegetation. This plan shall be completed within one year after approval of the permit revision and shall be designed for implementation of a comprehensive landscape plan that will provide an effective vegetative cover over the long-term. The plan shall provide for an effective vegetative cover with native drought tolerant vegetation on disturbed surfaces in those portions of the site where disposal activities have ceased. An effective vegetation cover shall be

fifty (50) percent coverage of the revegetated areas without permanent irrigation after a five (5) year period.

- 15.(4.) The County shall have a qualified Geotechnical consultant prepare a stability analysis of the Landers Sanitary Landfill if a slope ration steeper than 3h:1v would be utilized at the site. Any measures required in the geotechnical study to ensure that the Landfill does not cause a threat to life or adjacent property shall be implemented.
- 16.(11.) ~~WSD~~ SWMD shall ensure that adequate on-site first aid supplies and hygienic facilities are maintained at Landers Sanitary Landfill.
- 17.(14.) The County shall implement any recommended leachate and LFG controls required by the RWQCB, Colorado River Basin Region, to ensure that potential health risks to on-site personnel and adjacent property are not adversely impacted from the exposure to leachate or LFG.
- 18.(8.) Should night operations be undertaken to support recycling requirements, the County ~~WSD~~ SWMD shall monitor noise levels for a minimum of two weeks when operations begin, to ensure that a 50dBA sound level is not exceeded at the nearest sensitive receptor location as a result of such activities. If said noise levels are exceeded at sensitive receptor locations, the County shall require noise attenuation buffers to be installed to reduce noise levels to a 50-dBA threshold.
- 19(6.). All equipment shall be operated with required noise attenuation devices (such as mufflers) based on regulations in place at the time of use.

**Table 5**  
**Summary Of Changes To Mitigation Measures**  
**Landers Sanitary Landfill**

Current Mitigation Number	Proposed Mitigation Number	Proposed Mitigation Measure	Reason for change or deletion
1	Not applicable; measure is being deleted for reasons described in Column 4 of this table.	<del>1. All Waste Management Units (WMU) are required by State Law (Title 23, Chapter 15, Section 2547 (a)) to be designed to withstand the maximum probable earthquake or maximum credible earthquake without damage to the foundations or structures which control leachate, gas, surface drainage and erosion. Any landfill liners, LFG, anti migration systems, or concrete drainage channels which may be constructed at the Landers Facility in the future shall be designed to withstand the maximum probable earthquake.</del>	This measure is being deleted from the MMCP because it is required by State law for any of the following systems to be installed on-site: landfill liners, landfill gas systems, anti-migration systems, or concrete drainage channels
2	Not applicable; measure is being deleted for reasons described in Column 4 of this table.	<del>2. Final slopes shall be revegetated with native plant species, primarily grasses and shallow rooted shrubs at the earliest possible time to reduce contrast with the surrounding environment, stabilize slopes from erosion, and control topsoil loss.</del>	This measure was performed as presented in the Preliminary Closure and Post Closure Maintenance Plan as revised in April of 1995:
3	14	14. To control the loss of topsoil and provide erosion control, a revegetation/landscape plan shall be prepared for the Landers Sanitary Landfill by a qualified landscape architect or biologist with experience using native vegetation. This plan shall be completed within one year after approval of the permit revision and shall be designed for implementation of a comprehensive landscape plan that will provide an effective vegetative cover over the long-term. The plan shall provide for an effective vegetative cover with native drought tolerant vegetation on disturbed surfaces in those portions of the site where disposal activities have ceased. An effective vegetation cover shall be fifty (50) percent coverage of the revegetated areas without permanent irrigation after a five (5) year period.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
4	15	15. The County shall have a qualified Geotechnical consultant prepare a stability analysis of the Landers Sanitary Landfill if a slope ration steeper than 3h:1v would be utilized at the site. Any measures required in the geotechnical study to ensure that the Landfill does not cause a threat to life or adjacent property shall be implemented.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
5	Not applicable; measure is being deleted for reasons described in Column 4 of this table.	<del>5. The County shall prepare the Comprehensive Drainage Design for the ultimate landfill configuration as part of the Preliminary Closure/Postclosure Maintenance Plan. This design shall include minimizing runoff from elevated portions of the landfill, providing an adequate surface runoff collection system to minimize on site erosion; installing adequate sedimentation basins to prevent down stream siltation/deposition; and identifying remedial measures to be implemented if erosion occurs on landfill side slopes during severe precipitation events.</del>	This measure was performed as presented in the Preliminary Closure and Post Closure Maintenance Plan as revised in April of 1995:

**Table 5**  
**Summary Of Changes To Mitigation Measures**  
**Landers Sanitary Landfill**

Current Mitigation Number	Proposed Mitigation Number	Proposed Mitigation Measure	Reason for change or deletion
6	19	19. All equipment shall be operated with required noise attenuation devices (such as mufflers) based on regulations in place at the time of use.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
7	Not applicable; measure is being deleted for reasons described in Column 4 of this table.	<del>7. Employees shall be provided with hearing protection devices if any potential exists that they may be exposed to noise levels that could harm hearing. The County shall institute a program to insure that hearing protection devices are implemented by employees where hearing threats exist.</del>	Hearing protection is now a requirement of the California Occupational Safety and Hazard Association for workers subject to high noise levels; therefore this mitigation measure is being deleted from the MMCP:
8	18	18. Should night operations be undertaken to support recycling requirements, the County <del>WSD</del> SWMD shall monitor noise levels for a minimum of two weeks when operations begin, to ensure that a 50dBA sound level is not exceeded at the nearest sensitive receptor location as a result of such activities. If said noise levels are exceeded at sensitive receptor locations, the County shall require noise attenuation buffers to be installed to reduce noise levels to a 50-dBA threshold.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
9	Not applicable; measure is being deleted for reasons described in Column 4 of this table.	<del>9. The WSD shall continue its loadchecking program to ensure hazardous wastes are not disposed of at the active working face of the landfill.</del>	Mitigation measure is no longer required as it has been included as part of the daily operations and is documented in daily logs maintained by on-site personnel.
10	Not applicable; measure is being deleted for reasons described in Column 4 of this table.	<del>10. WSD shall continue to provide adequate containers for the temporary storage of hazardous wastes illegally disposed of at Landers Sanitary Landfill.</del>	Mitigation measure is no longer required as it has been included as part of the daily operations and is documented in daily logs maintained by on-site personnel.
11	16	16. <del>WSD</del> SWMD shall ensure that adequate on-site first aid supplies and hygienic facilities are	

**Table 5**  
**Summary Of Changes To Mitigation Measures**  
**Landers Sanitary Landfill**

Current Mitigation Number	Proposed Mitigation Number	Proposed Mitigation Measure	Reason for change or deletion
		maintained at Landers Sanitary Landfill.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
12	Not applicable; measure is being deleted for reasons described in Column 4 of this table.	<del>12. WSD shall provide a comprehensive training program for disposal site personnel in the safe handling and storage of hazardous wastes.</del>	Mitigation measure is no longer required as it has been included as part of the daily operations and is documented in daily logs maintained by on-site personnel.
13	Not applicable; measure is being deleted for reasons described in Column 4 of this table.	<del>13. Proper operation of the facility shall include regular inspection of the disposal working areas to ensure that adequate compaction and cover of refuse has eliminated both habitat and food for flies and rodents. If these inspections reveal the presence of pests on site, a pest control specialist shall be brought to the site to implement appropriate measures to control this health nuisance.</del>	Mitigation measure is no longer required as it has been included as part of the daily operations and is documented in daily logs maintained by on-site personnel.
14	17	17. The County shall implement any recommended leachate and LFG controls required by the RWQCB, Colorado River Basin Region, to ensure that potential health risks to on-site personnel and adjacent property are not adversely impacted from the exposure to leachate or LFG.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
15	12	12. The project is located in an area containing protected desert native plant species, Joshua trees, per San Bernardino County Code Section 89.0420. Removal of any potential desert native plant is subject to procedures set forth in San Bernardino County Code Section 89.0115 pertaining to Removal Permits.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
16	13	13. A program shall be developed by a qualified biologist(s) to monitor existing raven populations at the	This mitigation measure shall remain a part of the new permit revision

**Table 5**  
**Summary Of Changes To Mitigation Measures**  
**Landers Sanitary Landfill**

Current Mitigation Number	Proposed Mitigation Number	Proposed Mitigation Measure	Reason for change or deletion
		<p>San Bernardino County Sanitary Disposal facilities located on public lands. The purpose of this program shall be to determine potential raven habitat and migratory behaviors. Appropriate measures will be developed through implementation of this program to reduce potential habitat at disposal facilities and eliminate and/or reduce existing use of disposal facilities by the raven. This program shall be prepared by the <del>County WSD</del> SWMD in conjunction with the BLM, USFWS, and the California Department of Fish and Game (CDFG) and approved by the LEA and the BLM. All feasible mitigation measures developed through this program shall be incorporated into project design and/or operations. Mitigation measures may include but not be limited to the following:</p> <ul style="list-style-type: none"> <li>• Removal or alteration of potential perch sites (i.e., building, fences, sign posts, communication and/or power poles) on or near landfill sites.</li> <li>• Use of approved perimeter fencing designed to prevent access to the site by the tortoise and coyote.</li> <li>• Proper screening of areas and/or containers which may be exposed to ravens for any extended duration of time.</li> <li>• Enforce management practices that ensure efficient coverage of refuse and adequate drainage at the landfill to reduce potential food sources for the raven.</li> </ul>	<p>application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.</p> <p>Changes to the original text, shown here in strike-through format, reflects the department's name change.</p>
17	4	<p>4. If the MDAQMD determines that State mandated tests indicate potentially significant impacts to air quality due to the Solid Waste Facility, the <del>County WSD</del> SWMD shall comply with mitigation required by the MDAQMD.</p>	<p>This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.</p> <p>Changes to the original text, shown here in strike-through format, reflects the department's name change.</p>
18	5	<p>5. Provide adequate access and disposal areas at the facility to reduce the period of time that delivery vehicle engines are required to idle at the site.</p>	<p>This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.</p>

**Table 5**  
**Summary Of Changes To Mitigation Measures**  
**Landers Sanitary Landfill**

Current Mitigation Number	Proposed Mitigation Number	Proposed Mitigation Measure	Reason for change or deletion
19	6	6. Maintain all landfill equipment in proper tune per manufacturers specifications.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
20	7	7. <del>WSD</del> SWMD and/or the landfill operator shall secure and comply with all required MDAQMD permits for operation of the Landers Sanitary Landfill facility.	<p>This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.</p> <p>Changes to the original text, shown here in strike-through format, reflects the department's name change.</p>
21	8	8. The operator shall comply with Rule 403.2 of the MDAQMD.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
22	9	9. The operator shall continue its program of maintaining unpaved access roads in proper condition and by frequent watering. The first daily spraying shall be prior to initiating landfill operations at the site and subsequent spraying shall occur as needed during the day to provide adequate dust control.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
23	10	10. Water spraying of the work areas (landfill and borrow areas) shall be implemented periodically throughout the day. The facility will require improved dust control during the windy season or when	This mitigation measure shall remain

**Table 5**  
**Summary Of Changes To Mitigation Measures**  
**Landers Sanitary Landfill**

Current Mitigation Number	Proposed Mitigation Number	Proposed Mitigation Measure	Reason for change or deletion
		fugitive dust is observed migrating from these areas, utilizing either more frequent applications of water to the dirt roads and working areas or the application of approved dust palliatives.	a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
24	11	11. For areas that are at final grade, revegetation shall be initiated in accordance with the landscape plan required in Mitigation Measure 17. Areas not at final grade but that will not be disturbed for more than three months and are observed to generate fugitive dust, shall be sprayed with dust-binding chemicals or covered with other materials (gravel, plastic, wood chips, etc.) to reduce dust.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
25	1	1. Maintain at least two permanent crewmembers each day to pick up litter both on and off-site that has escaped the control devices.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
26	2	2. Implement the use of portable litter fencing during periods of high wind conditions to control the migration of litter from the site.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.
27	3	3. All exterior lighting, either permanent or temporary, shall consist of low-intensity sodium vapor lamps. All lights shall be shielded to ensure that the area of illumination is confined to the landfill or County property boundaries.	This mitigation measure shall remain a part of the new permit revision application and has been renumbered to reflect the County of San Bernardino's reorganization of the Initial Study.

## REFERENCES <sup>4</sup>

San Bernardino County Waste Services Division. Landers Sanitary Landfill Initial Study for the Solid Waste Facility Permit Revision. 1997.

Geologic Associates. Engineering Feasibility Study for Corrective Action, Landers Sanitary Landfill. April 2001.

California Regional Water Quality Control Board, Colorado River Basin Region. Waste Discharge Requirements for County of San Bernardino, Owner/Operator Landers Waste Management Facility, Class III Landfill, Class II Surface Impoundments. July 8, 2002.

State of California Solid Waste Facilities Permit, Landers Solid Waste Facility 36-AA-0057 issued on July 1, 1999.

Geologic Associates. County of San Bernardino Water Quality Monitoring Report, Fourth Quarter (Fall) 2003/Annual Volume I, Colorado River Basin Region. February 2004.

Mitigation Monitoring and Compliance Program for the Repermitting of the Landers Solid Waste Facility. 1999.

Joint Technical Document, Landers Sanitary Landfill. Lilburn Corporation. June 2004.

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<sup>4</sup> All referenced documents are available for review at the SWMD office, 222 West Hospitality Lane, 2<sup>nd</sup> Floor, San Bernardino, CA 92415.